



A Treatise on Lung Diseases,

GIVING THE METHODS OF DIAGNOSING AND
TREATING THESE DISEASES AS
EMPLOYED BY

W. R. Amick, A. M., M. D.

The chemical treatment having passed safely through the *probation* period of its introduction, its superior merits having been proven beyond dispute, by the most trying tests; it now presents itself to the most conservative physicians, not as an instrument of experiment, but a tried and established fixture in medicine.

Time has convinced the most sceptical that we have not exaggerated the treatment in any respect, that we have kept the best interests of the medical profession in view in everything we have done, just as we promised we would.

The generous confidence placed in us by the profession, regardless of school, is appreciated and respected by us.

We shall adhere strictly to the rules by which we have heretofore distributed the medicines to physicians.

The Amick Chemical Co.,

166 W. Seventh St.,

Cincinnati, Ohio, U. S. A.

Prefatory.

At the request of Dr. Amick, this pamphlet is more conservative than those which have preceded it. Dr. Amick protests that anything more than a mere statement of his theory, a description of his treatment, and an announcement that we are the sole compounders of the medicines comprising it, is uncalled for and would prejudice his professional standing. We therefore omit all matter which might be deemed unprofessional. If, however, the mere fact that the Amick treatment has been generally adopted by the medical profession is insufficient for any skeptic, we will send on special request any quantity of testimony from thousands of physicians now daily prescribing it.

To those unacquainted with his life work we may be permitted to say that Dr. Amick received the degree of A. M. at Hanover and that of M. D. from the Cincinnati College of Medicine and Surgery. He was connected with this last named college for seventeen years as a professor and as the Secretary of the College Faculty. This, with his honorable record in connection with the Cincinnati Hospital and other leading medical institutions, has entitled him to the confidence so willingly accorded his treatment by the profession.

The "Chemical Treatment" for pulmonary diseases, which he has instituted, is the happy result of twelve years' study and research.

The etiology and pathology he presents are worthy profound consideration on the part of every thinking person.

Taking his new theory as a basis for a suitable and successful treatment for these diseases he adroitly worked out results truly marvelous in the estimation of leaders of the profession.

Not wishing to be classed as a mere theorist, he has spent years in perfecting a treatment which would corroborate and vindicate his etiology and pathology of these diseases, and his efforts have been crowned with wonderful success.

His brother and co-worker, Marion L. Amick, A. M., M. D. is also a graduate of the literary college at Hanover. He has been connected with the Cincinnati College of Medicine and Surgery for twenty-two years as professor of anatomy and diseases of the nervous system, also a member of the Board of College Trustees, and acting secretary of that body. As a specialist in nervous diseases he has no superior in America. He has for years enjoyed the largest individual practice in Cincinnati.

It is proper to couple his name with this discovery, for he is now as he has ever been closely associated with his brother in his work, rendering him valuable aid. He has conducted nearly all of the preliminary test cases, his extensive practice affording him a wide range in selecting suitable test patients. They are both fine chemists and have a broad knowledge of *materia medica*.

We need not urge that these men are eminently fitted and qualified to advance medical science as they have surely done.

The author knowing beyond dispute that he has worked out an absolute cure for diseases heretofore admitted to be incurable, and profiting by the experience of others, has, in the interests of suffering humanity and for the benefit and protection of all conscientious physicians, having an honest desire to heal the sick, placed his formulæ in trust with this company.

The medicines for carrying out the Chemical Treatment are compounded exclusively for physicians. They are the purest science can produce.

The Theory (Amick.)

The Chemical Treatment is so named because it depends upon chemical combinations and chemical action. It is based upon the theory given in the author's original article published in the Cincinnati medical journals of March, 1892; and subsequently published in numerous leading medical journals.

In this article we do not intend speaking of the history of consumption, or enter into any discussion of the various theories that have been promulgated as to the cause of the disease. We believe there is a unity of cause, but there may be many varieties of the disease. This is in conformity with nature, as a plant, or flower may have a given name, yet be a large family in variety.

Consumption is a deceptive disease from the fact that in the incipient stage, frequently the symptoms that would naturally be expected are not present. In commencing posterior spinal Sclerosis, on account of wandering and darting pains in the body or lower extremities, the subject thinks he has rheumatism. A similar mistake is sometimes made in some cases of consumption. An individual may have a variable appetite with dull pain, weight, or sense of fullness or distension in the stomach after eating, which may be accompanied with heart-burn, headache, furred or coated tongue, depression of spirits and irritability. He thinks he has dyspepsia and takes treatment for that disease. Later he has all the symptoms of consumption in the second stage developed in a few days. This would indicate that the disease was in the lungs from the first, but the symptoms were deceptive inasmuch as they referred to the stomach as the seat of the malady. This error is frequently made by physicians. They take the rational symptoms and from them they make their deductions or diagnosis.

We have examined patients in the second stage of consumption with the characteristic and typical changes in respiration, together with the crepitant and subcrepitant rales, in which there was an entire absence of soreness, pain, cough or any rational symptom that would indicate an abnormal condition of the lungs. In these cases it will be noticed there was an unaccountable dyspnoea on exertion and that they were losing both weight and strength. These three conditions would be all the symptoms that they would mention.

In order to have a proper conception of the theory which we present, and be able to comprehend it, we will first refer to some of the conditions which are presented by this disease and commence with the question: Why does consumption generally begin in the apex of the lungs?

In order to answer this question properly, we must first remember that at the apex the lung tapers almost to a point and extends an inch or more above the first rib. For the blood to circulate freely in this portion of the lungs, there must not be any obstruction or undue pressure upon the blood vessels. An obstruction in this part of the lungs is a greater obstacle to the circulation than in any other portion, for during the time of exposure, and at the time when a free circulation is imperative to prevent a congestion, the body is generally erect, and the propelling force is not sufficient to overcome both gravity and the obstructed or contracted vessels.

As the result we have a stasis of the circulation in this locality, a congestion and dilatation which become manifest at the extreme apex first. On auscultation at this time there would be perceived a harsher, higher pitched inspiration sound. Later there would be some exudation into the air sacs, and a delicate fine crepitation could be heard at the close of a deep inspiration at a time when no abnormal sounds could be heard below the clavicle. At the inception of the disease no abnor-

mal sounds can be heard at the extreme apex during ordinary respiration and they are only developed on deep inspiration.

This is one of the reasons why the disease is frequently overlooked in its incipency. The physician examines the lung an inch or two below the clavicle, and then says the lung, including the apex, is normal, because he does not discover anything abnormal at that point. On the same principal we would say that there was nothing the matter with the optic nerve because the media was clear, or that the retina was normal because the ophthalmoscope gave a red reflex from the fundus.

Congestion, dilatation, and stasis form a trinity that are combined in one general condition and is ever present in these cases. At first the congestion may be so slight that there will be no local symptoms that can be determined, especially by a casual examination, but exudation and crepitation present themselves if the former is not removed. If the other organs of the body are in a healthy condition, then the probabilities are that there would be enough potential energy and positive force generated to remove the pathological condition at the apex of the lungs. Otherwise it would develop until the symptoms both local and general became manifested.

The upper and posterior portion of the lungs are more susceptible to cold than any other part, especially in those who are disposed to hereditary pulmonic disease. In these cases also, the rule is, that the antero-posterior diameter of the chest below the outer portion of the clavicle is very short. This means not only a thin chest wall but a very narrow apex with a comparatively small amount of circulation. All of these conditions favor the action of cold upon this part of the lungs. Cold contracts these vessels and all that is necessary to have a congestive reaction is to have the cold severe enough, or sufficiently long continued, and we have all that is nec-

essary to give the disease a start in the catarrhal form. After it has once developed a locality of irritation, it will continue and increase, unless something is done to overcome the destructive process.

Nature always makes an effort to expel an intruder, and sometimes overcomes the localized inflammatory condition, but the effects of one cold follows another, with a gradual extension of the disease, and the potential energy of the system is reduced until the requisite amount of kinetic force cannot be generated to meet the demands for it. Then we have the commencement of that chain of symptoms with which all are familiar, such as emaciation, loss of strength and appetite, cough, expectoration, dyspnoea, fever, pain, weakened circulation, etc.

It is not our intention to speak of the manifest symptoms that are plainly visible to any one, but direct attention to the original cause and the first or incipient stage, when the symptoms are obscure and not noticed, or if attention is directed to them, they are generally dismissed with the statement that they do not amount to anything.

We have given cold as an exciting cause for consumption, for the purpose of calling attention to the fact that the shoulders and back should be protected from its influence, more especially in those individuals who have thin or flat chests, or have any hereditary predisposition to consumption.

Any obstruction to the circulation may result in a congestion that will develop this disease. A tumefaction pressing upon the nerves that supply the capillaries in the apex may be the exciting cause. A pathological condition at the origin, or along the course of the par vagum or sympathetic, will produce a vaso-motor disturbance, and a paresis in the walls of the vessels is immediately followed by congestion and stasis. From the same source we have a defective application of nutri-

tion at the apex and a pathological condition is the result. In those cases where we have a tubercular deposit taking place early in the disease, it is due to a want of proper oxidization. This condition, if it does not exist in the incipency of the catarrhal form, is soon developed, and in fact, is present before the disease has assumed the character of consumption. If oxidization and nutrition were perfect, consumption would not exist.

In a normal condition of health there is an uniform ratio between the action of the lungs and heart. In a given case we will say that the heart beats seventy-two times in a minute, while in the same length of time there are eighteen respirations. This then is the ratio of health for these organs. By this we understand that for the blood to receive the proper amount of oxygen for the system, it must flow through the capillaries of the lungs at the rate produced by seventy-two heart beats per minute. With the blood flowing at this rate, there must be eighteen respirations per minute in order to supply the amount of oxygen that the blood will take up and that the system demands in health. Then the supply and capacity for acceptance are equal.

If from any cause some of the air sacs are prevented from receiving the air, then the blood will not obtain the amount of oxygen that the system requires. Nature then makes an effort to overcome the trouble by increasing the respirations per minute so that more air can be taken into the cells that are patulous. If the blood current does not flow any faster, then the compensation will not take place, as the current was adapted to eighteen respirations per minute, and received all of the oxygen that it could carry.

For the compensation to take place, the heart must beat more rapidly to make the current flow faster. If there is a slight congestion blocking up but a few cells, then the increase in the action of these organs will be

slight. The larger the number of cells that are deprived from receiving air, the greater the increase in respiration and heart action, until it may be two or three times as great as the normal health rate.

This is the reason why we always have increased respiration and pulse in those cases where there has been a disintegration of lung tissue with the formation of a cavity, even though the latter may have cleared, and the inflammatory condition become quiescent, or in those cases where the air cells have become obliterated without destruction of the parenchyma of the lungs. In either case increased respiration and heart action is the result with dyspnea on exertion. This condition imposes extra work on these organs, and if long continued may exhaust the motor excitability of the heart.

We might have a condition presented which would indicate a reduction in the number of respirations per minute and an increase in the heart's action. This would be like looking at a very near object with a strong contraction of the internal recti and at the same time have a relaxed accommodation. It is possible that it might occur, but it is not natural or probable and if it did it would indicate an abnormal condition. This is the ratio that is indicated in the tubercular subject but it is not the condition that is present.

Harmony is the great law of nature and is the natural physiological condition that should exist in the system. When, from any cause this law is broken, nature makes an effort to rectify it. She may be successful and equilibrium having been restored, the various organs act in unison.

CAUSE.

There is a disposition on the part of some physicians to give very little credence to heredity as a source of this disease, and to say that the cause of all forms of consumption is the bacillus tuberculosis, which must be received either directly or indirectly from some other

tuberculous subject. Any person who will carefully study and analyze the above declaration, will perceive that it is a broad statement, intended to account for the origin of all cases of tuberculosis in which nature, as such, has nothing to do.

In other departments physicians recognize the development and transmissability of traits and conditions. In the development of the various races, they see that it is the preponderance of the brain case over the facial portion of the head, that gives to man his superiority as compared with the lower animals, and that the intellectual capacity for mental and general improvement is estimated by the same standard. By a life of thought, study, research, and reflection the mental capacity for a given profession is acquired. An acquired faculty in one generation is the birthright of the next. A faculty or bias of character, that has been formed by environments and circumstances in an individual, is transmitted to the children as an inheritance. If this is true of the mental organization, why is it not true with the physical?

A person may be born with consumption, that is, it may be innate, they may be born with the habit or diathesis which favors a predisposition or tendency toward the development of the disease. In other words it may have an hereditary dyscrasia.

It is the opinion of some that consumption is caused by a fungoid or vegetable growth in the blood, causing it to become watery.

La Grippe is accountable for a larger number of cases of consumption than any other disease. After the acute symptoms have disappeared there remains a little cough, a little soreness in the chest, some dyspnoea on exertion, with a variable appetite, and a want of the normal ambition and vigor. They may have the assurance given them by the physician, that it will pass off in a few days and then they will recover their former state of health. But after the few days have passed, they find that they

are worse instead of better. The few days amount to weeks, and even months, and during all this time they have been gradually failing, until finally they are informed that they have consumption.

During the *few days* that they were on the *promised probation* was the time that a proper conception of the nature of the disease and a suitable treatment would have restored them to health and prevented weeks of pain and suffering, to say nothing about the mental anxiety of the apparently inevitable result.

There are cases not due to heredity, or atavism, or to any local exciting cause so far as we can determine. We refer to those cases in which the disease is developed so gradually and insidiously that it is impossible to state the time when it began. In these cases we find the first symptoms noticed on the part of the individual, are a slight loss of flesh and strength. There may be a little soreness, or a burning sensation under or between the scapulae, but it is not considered to be of any special importance. There may be a little cough, but as it is of a hacking character, with little or no expectoration, it is considered, and may be so-called by the physician pharyngitis. A careful examination at this time would reveal deficient inspiration at the apex of one or the other, or perhaps both lungs. A comparison in the respiration in the apices may be deceptive, for the character might be the same, both being equally involved, hence, it is necessary for us to be familiar with the physiological condition and be able to differentiate between it and an incipient pathological one.

This is the most important stage of consumption, for if at this time the disease is recognized and the proper course of treatment instituted, the individual escapes the weeks and months of anxiety, pain, suffering, fever, night-sweats, emaciation, etc., that makes up the life of the average consumptive.

The nervous system in some individuals is so constituted that it can be keyed up to a high tension and maintained at that pitch for hours at a time during the excitement of business, but with relaxation there comes a depression of the entire system with mental perturbations and gloomy forebodings. This condition can be kept up for a given length of time with a little loss of general physical energy after each effort. The pathological conditions may be almost imperceptible at first, but eventually, like Banquo's ghost, "they will not down," and their presence becomes more annoying. This class, under favorable conditions, are very amenable to treatment.

In some individuals with a bilio-phlegmatic temperament, there is a stupidity of the nervous system, so that they can not go beyond their own individual environments and symptoms. They can not produce a stable tension of the nervous system and mentally go out into space and build new conditions out of the elements, but are shut up within themselves, and the only companion they have is the ever present hydra-headed vampire that is living a parasitical life on their vital forces. All of the future they can see is a lethal ending of their more mental than physical suffering.

If we can get these individuals to take their thoughts off themselves, to quit conjuring up a feeling of moroseness and morbid foreboding, to stop the mental irritation of the nervous system and take a drink of the water of Lethe, so far as the disease is concerned, then we have placed the system in the best condition to be benefited by treatment.

The bacillus tuberculosis is said to be the cause of all cases of consumption or tuberculosis, but we will modify this statement and say that *the bacillus tuberculosis is not the cause of consumption*, but simply one of the products of the disease, as we will show in our theory.

Any condition or disease that depresses the system, or reduces the vital forces, will produce a condition that is favorable for the development of consumption. Then, what causes *the condition or disease* that makes a reduction in the vital forces? The answer to this will be our theory of the

CAUSE OF CONSUMPTION.

The nervous system is the highest and the blood the lowest product of nature's work in the human laboratory. The blood stream is the great highway of commerce for the system. Into this stream we have poured the crude material that is used in the construction and regeneration of all the tissues of the body. Before the crude elements of nutrition can take their place in the system and become a part of the organs, they must undergo a chemical change. Even after they have been deposited and have become a part of the tissues of the body they are still dependent upon the common carriers in the blood for the necessary vivification to continue their part in the economy.

If the nutritious element receives the necessary chemical action, it will be changed to protoplasm and then deposited as an organized product in the various structures of the body. It will then be capable of receiving the necessary force that it must contain for it to perform its functions in a normal manner.

It must not be supposed that being thus placed in the organs that it is therefore a mere brick in the wall, simply to support the weight or pressure that is above or around it. It is a part of the wall, but it is more—it has a function to perform, and it must not only be in condition to receive force, but to retain it and then expend it **when the demand is made.**

But the conditions are such that the chemical change is incomplete. The result is that this imperfect chemical product is not in a suitable condition to become a

part of the normally organized healthy tissue, and to a certain extent, acts as a foreign body and develops an irritative tendency. Nature makes an attempt to remove it and kinetic force is lost in this unsuccessful effort, as the same complete chemical change is absolutely essential before disintegration and excretion can take place.

Another factor in favor of the disease involving the apex of the lungs first is, on account of what has already been stated, this part is more liable to receive protoplasm that has not been sufficiently oxidized, and nature makes an effort to throw it off at the point where it has been received. This together with a possible peculiar elective affinity on the part of the lungs, is the reason why it is deposited in them, and it then forms those little masses called tubercles.

It can be seen from this that the tubercles are formed from nutrition that is only partially oxidized and is not suitable to enter into the formative organization of the tissues of the body, as they require cells made of chemically perfect material. The tubercles then develop an organism having a lower formation, and the result is that in them we have the bacilli formed. The bacillus then is a product of consumption, and not the cause of it, as the pathological process must exist some time before they are developed.

The tubercles may be deposited or formed in the different organs of the body, but this irritative tendency is generally developed in the lungs first, and they most frequently become the seat of the disease.

As the result of this general condition we have the cells in a condition in which they can not receive and contain the amount of potential energy that is essential in carrying on the functions of life. When a demand is made on them they develop a condition of instability but their power is soon expended in kinetic force and they are exhausted and lapse into stability. They should then rapidly accumulate potential energy, but on ac-

count of the imperfect condition of the cells in the blood they do not receive the amount of oxygen that is necessary, and the result is they do not receive the proper quality of vital force as rapidly as they should. They also lose, to a certain degree, the power of containing and maintaining this force in a latent form in the proper quantity. The blood does not receive the proper amount of oxygen, or if it does receive it, it can not be taken up by the system and utilized in the conversion of nutrition into tissue, and hence the cells do not contain that intrinsic agent that gives them the substantial expression of health, but on the contrary we have a defective or perverted manifestation of vital force. The human economy is a machine with the mechanism so arranged that it generates its own potential energy within itself and furnishes its own kinetic force. This means that all of the various organs must act in harmony and there must be a normal equilibrium between waste and repair. Any condition that prevents this harmony or destroys this equilibrium is a cause of disease.

As a result of this incomplete chemical action, this imperfect oxidization, the system does not receive a sufficient amount of nutritious pabulum and the reserve force in the system is utilized. The adipose tissue gives up its potential energy to continue the work of vitality, and as there is no more power to replace that with which it has parted, it becomes absorbed and disappears from the system. Then the muscular structure and connective tissue in turn give up their latent vitality and gradually disappear. This is the cause of the progressive emaciation which we see in consumption and **other wasting diseases.**

As the emaciation increases, the resisting power of the system becomes less, until it reaches a negative condition where it is easily influenced by almost any additional exciting agent. The effect may be to more rapidly

extend the destructive process in the lungs or develop a complication in some other organ or part of the body. A negative condition is easily influenced by cold, while a positive one would not be injured in the same temperature.

Light is the great oxygenizer of the universe, and this is the reason why consumptives feel better when they are situated so they can be in the open air. In a majority of these cases the system is not in a condition to take the oxygen from the air and appropriate it, not on account of faulty nutrition, but because the nutrition can not be assimilated and utilized.

CLIMATE.

It might be inferred from the above that climate would be an important factor in the treatment of consumption. A dry climate, without any sudden changes or great range in temperature, where the individual can spend a considerable portion of each day in the open air, is beneficial. The majority of consumptives are not favored with this kind of a climate and are so situated financially or otherwise that they can not make a change. It is a noted fact that when consumptives leave their homes and go to another climate and are apparently benefited, that in a short time after they return they have a relapse. They may then go back to the climate that appeared to be beneficial, but the disease will progress as rapidly as if they had remained at home. The proper method of dealing with consumptives is for them to remain in their own climate where they expect to live, and take the treatment at their own home. Then, while the treatment is removing the cause and restoring the organs to a normal condition the system becomes habituated to the climate in which they must live.

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The Different Stages and Phases of Consumption.

BY W. R. AMICK, A. M., M. D.

In order for a person to make a proper examination of the lungs, the first thing necessary is to be familiar with the normal sounds. Take a man with thin chest walls, known to be free from pulmonary disease, and, with his clothing removed, apply the ear firmly to the chest two inches below the center of the left clavicle and listen to the respiration in ordinary breathing. This will give us the normal vesicular murmur. Then have him breathe deep and notice the change in the character of the sounds. Then listen to the right lung two inches below the center of the clavicle and notice the difference between the two sides, especially on deep respiration. When we become familiar with the normal sounds then we will be able to recognize an abnormal or pathological one when we hear it.

The classification which we make is based upon the recognized division of consumption into three stages, viz: First, second and third. From this division there does not appear to be any distinct rule or line of demarcation given to govern us in our diagnosis, but we have to depend upon our own judgment as to whether we shall say a patient is in the first, second or third stages of the disease. For the purpose of aiding the physician to discriminate between the various stages of the disease, we will give our method which is based upon the anatomy of the lungs, and try to make it so plain that with a careful examination, together with the requisite amount of skill, the various conditions may be differentiated. We divide the disease into stages and phases and it is easy to determine the stage from the phase.

The first stage is that of congestion of the mucous membrane of the air sacs and bronchi with commencing exudation into the air cells. The second stage is the engorgement of the air sacs and smaller bronchi, in which they are occluded or filled with a compressible exudation which lessens the expansion of the lungs but does not destroy it. The third stage is one in which solidification of the exudate in the air sacs and bronchi takes place, together with the extension of the engorgement to the parenchyma of the lungs with or without the formation of cavities. The expansion in that portion of the lung in this stage is obliterated although the mechanical movement of the ribs will be observed, especially on deep inspiration. We differentiate between a movement of the ribs by expansion from the lungs and that from muscular action. Some have an idea that a person is not in the third stage of the disease until cavities have formed. In order to show that this is not correct, it is only necessary to state that at least fifty per centum of those who die from consumption do not have cavities.

Percussion is universally practiced in the examination of the lungs, yet it is not reliable as a diagnostic sign by itself. Dullness on percussion does not always signify consolidation of the lung structure beneath, or that fremitus will be increased. We never give an opinion of the condition of the lungs from percussion alone. If we have dullness over a portion of the lung, then we auscultate that part carefully before we make a diagnosis, as it might be the result of pleuritis, effusion into the pleural cavity, aneurism, etc.

The anatomical method of defining rales would be mucous and sub-mucous in solidification, sub-mucous and sub-crepitant in partial consolidation and crepitant in commencing exudation, but more than one kind of a rale may be heard in the same locality in almost any stage or phase of the disease. Adventitious rales or

sounds are heard principally in the third stage. A raleus click may be heard in almost any stage of the disease, but more especially in the second and third stages. As a rule the pitch of respiration increases with consolidation and is generally harsher and more prolonged. Pain and wavy respiration are indefinite. They may be present in any stage of the disease. They may be constant or they may be absent. A hemorrhage may occur in any stage of the disease, and quite frequently the first indication of pulmonary trouble is from an unexpected hemorrhage. Laryngitis may also occur at any time, but principally in the second and third stages.

The following classification of the various stages and phases are based on the supposition that the disease began at the apex and pursued a typical course. Quite frequently it begins at the base or even in the center of the lung from pneumonia or pleuritis. We have named the anterior regions of the chest only, but there are cases where the consolidation or solidification is confined to the anterior part of the lung, while the posterior portion is partially consolidated. It is very easy to describe such a condition by saying, "Fourth phase in mammary region left lung, but second phase in scapular." Any region can be described in a similar manner. An entire lung may be involved without consolidation of any part of the lung, a condition which frequently follows la grippe. In such a case the entire lung is in a certain phase of the disease.

The disease frequently involves both lungs. Then all of the symptoms develop more rapidly. Loss of strength and endurance with dyspnea on exertion are much more pronounced than when the disease is confined to one lung. A condition of this kind can be described by saying, "Left lung, second stage, fourth phase; right lung, first stage, second phase," or name the regions and the phase. We might have one-half or one-third of a lung in the fifth or sixth phase and the rest in the

second, third or fourth. By naming the region and the phase the condition will be understood from the classification.

Crepitant and sub-crepitant rales may be heard in any stage of the disease. A crepitant rale might be heard in the same locality with gurgling and bubbling rales, but the latter would not exist in the phase that first produced the former. A rale is produced in a certain phase. It may be heard in the phases that follow, but it would not exist previous to its formative phase. Certain adventitious sounds may be developed in any stage or phase of the disease. It must be understood that frequently one or more of the symptoms in a given phase may be absent and even some of the symptoms of another phase present, but the combination of the signs will indicate the stage or phase.

Solidification and consolidation ordinarily are considered to mean the same condition; but we make a distinction between the terms. In the ordinary consolidation of the lungs the exudate is not so dense as in solidification. This is known by the character of the respiration (volume or amount of air entering the lung) and expansion which may be quite appreciable in consolidation, while in solidification no expansion exists in the part solidified and the respiration is confined to the larger bronchi. By commencing consolidation we mean a thickening of the mucous membrane of the bronchioles and air sacs not sufficient to prevent the air from entering the air sacs, but the character is rough, harsh or wavy with crepitation on inspiration. Partial consolidation is where there is not only thickening of the mucous membrane of the air sacs and bronchi, but exudation has taken place freely in both, partially filling them up, yet air passes into the air sacs. The sub-crepitant rale predominates and is frequently heard on expiration as well as inspiration.

In some cases the temperature in the first and third stages may be sub-normal especially in the forenoon and then normal or a very slight increase in the afternoon. Night sweats, or more properly ephidrosis, as the sweating is not confined to the night, as a rule have the same effect upon the fever as an antipyretic and reduces it.

First Stage—First Phase.

Rough, harsh or abnormal respiration which may be wavy, but vesicular in character, confined to a portion of one lung, generally the apex, without rales. Expiration a little longer than normal. Very little if any change in tension, fremitus or percussion note. There may be a slight hacking cough without expectoration. No appreciable loss of flesh strength or endurance. No sinking in the clavicular regions, and no perceptible change in expansion and respiration. There may be a slight increase in the pulse rate and a slight elevation of the temperature in the afternoon or evening or they may be normal. Appetite variable.

First Stage—Second Phase.

Inspiration a little higher pitched, generally harsh, with expiration slightly prolonged and may be wavy. Respiration vesiculo-bronchial to broncho-vesicular, with crepitation, especially noted on deep inspiration. Thickening of the mucous membrane of the bronchi and air sacs with commencing exudation, but the air cells are not filled with the exudate. Tension and fremitus may be exaggerated. Dullness of resonance may exist in the clavicular regions. There is generally not very much cough and little expectoration. Sputum mucoid or muco-purulent. Commencing loss of flesh strength and endurance. The patient is able to continue his occupation but somewhat easier fatigued. A very slight sinking may be noticed in the clavicular regions

With scarcely any change in respiration or expansion. There is generally a slight increase in the pulse rate with an elevation in temperature of from one-half to one and a half degrees F. Not much dyspnoea on exertion. Very seldom any moisture on the surface of the body after sleeping.

Second Stage—Third Phase.

Inspiration higher pitched, harsh with expiration prolonged and frequently wavy. Respiration bronchovesicular with crepitant and sub-crepitant rales. Exudation taking place in the air cells and bronchi, but they are still patulous so that the air passes into the air sacs. Tension and fremitus increased. Decided dull resonant in the clavicular regions shading off to resonant in the mammary region. There is generally considerable cough and expectoration, the latter being purulent in character. Some loss of flesh, strength and endurance. Patient able to continue his occupation, but easier fatigued. Sinking may be observed in the clavicular regions with some deficiency in expansion and respiration. Some increase in the pulse rate and temperature. Some dyspnoea, on exertion, and occasional epidrosis. In this stage we have a purulent sputum indicating that the inflammatory process had extended sufficiently to produce this form of an exudation. Tubercles are being deposited in which the bacilli are formed. We may then expect that bacilli can be found in this and the following phases.

Second Stage—Fourth Phase.

In this phase of the disease there is blocking or filling up of the air sacs or bronchioles, with exudation, producing consolidation in the clavicular regions. The exudate is soft and spongy in character and admits of compression and expansion. Partial consolidation in

the mammary and commencing exudation in the sub-mammary regions. Percussion dull in the clavicular regions, dull resonant in the mammary, becoming resonant in the sub-mammary regions. Respiration bronchial in character in the clavicular, broncho-vesicular in the mammary, and vesiculo-bronchial in the sub-mammary regions. Sub-mucous and sub-crepitant rales from sponginess of the exudate in the region of consolidation compressible exudation, sub-crepitant in the region of partial consolidation and crepitant in the locality of commencing exudation. Tension and fremitus increased in the regions of exudation. Cough and expectoration increased. Sputum purulent and more dense, cough may be exaggerated by reflex irritation of the pharynx. Sinking noticeable in clavicular regions. Loss of strength and endurance generally more marked than the loss of flesh, but the individual can generally follow his occupation. Deficient expansion and respiration in the region of dullness. Increase in the pulse rate and temperature and may be also of respiration. There may be hoarseness of the voice from congestion of the larynx. Dyspnea on exertion. Ephidrosis common.

Third Stage Fifth Phase.

In this phase of the disease there is a solidification of the exudate, so that it loses its compressible character in the clavicular region; consolidation compressible in the mammary region and partial consolidation in the sub-mammary region. Percussion decidedly dull or flat in the region of solidification, shading off to dull and dull resonant in the regions of consolidation, and then becoming dullness of resonance in the region of commencing exudation. Mucous, sub-mucous (sometimes mucous click) and occasionally scattered creaking rales in the parts that are solidified. Sub-mucous and sub-crepitant rales in the region of consolidation, with crepitant and some sub-crepitant rales in the region of

partial consolidation. Tension and fremitus generally quite marked in the regions of dullness. Considerable cough and expectoration, although the cough may be harsh, hard and tight, without much expectoration, and frequently aggravated by reflex irritation of the pharynx. Sputum purulent, generally heavy and tenacious, frequently nummular, may be yellowish, greenish or dark in color. Sinking in the region of dullness, generally quite marked in the clavicular regions. Loss of flesh, strength, and endurance more decided, although the individual may still follow his occupation but is easily fatigued. Decided deficiency of expansion and respiration in the regions of dullness. There is generally an increase in the pulse rate and respiration (the latter more noted on exertion) to compensate for the blocking up of the air cells. The temperature may not be increased very much above the fourth phase then again it may be 103° F. or higher. There may be an exacerbation in the thermal condition in the afternoon or evening with or without a chill. Dyspnoea becoming more decided. Hoarseness or even aphonia from implication of the larynx. Occasional swelling of the feet. Ephidrosis common.

Third Stage—Sixth Phase.

In the clavicular regions in this phase of the disease, the inflammatory process extends to the parenchyma of the lungs producing engorgement, frequently causing disintegration of tissue with the formation of cavities. The exudate may remain solidified, or be softened and removed by the mucous membrane becoming pyogenic, or by the purulent material from the parenchyma or an abscess cavity. Contraction or obliteration of the air-cells and bronchioles may exist. Solidification in the mammary and consolidation in the sub-mammary regions. The condition existing in the clavicular region may extend to the other regions and involve the entire

lung. Percussion dull, or amphoric, cracked-pot or tympanitic over a cavity or resonant in character from removal of the exudate in the bronchi. Dull to flat in mammary and dull to dull resonant in the sub-mammary regions. Respiration bronchial, tubular, amphoric, cavernous or blowing in the clavicular region, chiefly bronchial in the mammary and broncho-vesicular in the sub-mammary regions. Bubbling, metallic or amphoric tinkle, gurgling mucous or crackling rales, heard in the clavicular regions; mucus, sub-mucus or crackling rales heard in the mammary regions. Tension and fremitus generally increased, but they may be reduced in the clavicular regions. Cough generally frequent and hard coughing spells, with a large amount of expectoration, as a rule. Sputum purulent, heavy, tenacious and yellow, although it may be thin, greenish, dark or creamy in color. Sinking in clavicular region very decided. Emaciation with loss of flesh, strength and endurance. Individual can not follow his occupation. Very easily fatigued. Very little, if any, expansion. Pulse weak and respiration shallow, both increased, especially on exertion. Temperature generally above normal all of the time, higher in the afternoon and evening, although it may be sub-normal in the forenoon and normal or slightly increased in the afternoon. There may be distinct chills, or chilly sensation, or fever without either of the former. A hectic condition is very common. Diarrhea, or swelling of the feet and legs, or both are frequent. Dyspnea produced on slight exertion. Hoarseness or aphonia from laryngitis frequent. **Ephidrosis very common.**

The proper time to institute a treatment for consumption is in the first stage and if possible in the first phase

TREATMENT.

There are various forms of treatment for this disease, ranging all the way from the domestic cough syrup to the hypodermic injection of various agents: from the simple inhalation of steam through a paper cone to the pneumatic cabinet. Those who believe that the bacillus is the cause, say that the proper treatment is one that will exterminate this microbe. They treat it on the same principle as the itch, and say, kill the parasite and the disease will disappear. Some of the medicines used in the treatment of consumption are as follows: Guaiacoi, creasote, cod liver oil, hypophosphites, morphia, opium, hypodermic injections of various agents, such as tuberculin, chloride of gold and soda, iodine, iodoform, aristol, cantharidine, goat's blood, dog serum, oil of cloves, and various germicides. We refer to them for the purpose of simply saying that we do not use them.

We recognize the fact that there is a limit to the effect that can be produced by medical agents. It would be folly to claim the impossible for any treatment and say that it would restore tissue that had been completely destroyed.

The best treatment is the one that will restore the largest number to health, give the most relief from pain and suffering, and add to the sum of human happiness.

A treatment to be successful must be able to meet the three following conditions: First, correct the faulty chemical action and overcome the imperfect oxidization. Second, it must supply the system with the elements that are being reduced or destroyed and fill them with potential energy. Third, it must allay the irritative and inflammatory tendency and stop the waste of kinetic force.

The treatment that we have instituted for consumption is based upon our theory and arranged to meet the three general indications as given above. First, medicine in

form of a tablet for the purpose of supplying or increasing the elements that are being wasted and destroyed, and correct the faulty oxidization. Second, medicine in the form of constitutional drops, which assists the tablets in the performance of their work, allays the irritative and inflammatory tendency, develops the resisting force of the system, and stops the useless expenditure of kinetic force. For allaying the local inflammation and irritation in the lungs we use an inhaler. It is simply palliative and does not remove the cause, but is indispensable as a part of the treatment.

In Unison with Nature (Amick).

The human intelligence bears the same relation to the body that nature does to the earth. It is the all-pervading principle which dominates and controls evolution. Evolution is simply growth by the rule of nature, and this means development by gentle action and not by abrupt force.

It is not the dreadful storm, with its heavy black clouds, vivid lightning, reverberating thunder, hurricanes of wind uprooting the trees, and torrents of water deluging the land, that makes the earth productive, but it is the gentle pattering of the rain upon the leaves and grass, on the buds and flowers, over the fields and forests, that makes nature beam with a smile of renewed life.

It is the mild and gentle process that is productive of the most good in the lower forms of nature, why will not the same rule be equally as effective in the higher forms of development?

We claim the gentle zephyrs and the spring showers do more good than the tornadoes and the storms. We apply this principle to the treatment of diseases and develop the powers of the system by supplying it with the natural forces in such a palatable and mild form that it can be appropriated and utilized.

The chemical tablet is pleasing to the taste. Four tablets are taken in a day, four hours apart. A tablet is placed upon the tongue and left there until it dissolves; it then passes into the stomach without causing that feeling of nausea which frequently accompanies the swallowing of medicines.

The chemical constitutional medicine is pleasing both to the eye and to the palate. Dose, 20 drops, taken four times a day in a tablespoonful of water, alternating with the tablets.

These medicines can be taken into the most delicate stomach without producing a feeling of nausea or discomfort, and with the absolute assurance that they are not dangerous, and under no circumstance can they be productive of unpleasant or injurious results, provided they are used according to the directions given.

The inhaler and chemical inhaling medicine are only palliative, but are absolutely essential in this treatment, to give relief from the cough and irritation in the lungs while the medicines that are taken internally are removing the cause and building up the system.

The Evil of Procrastination.

For the last few years there has been an epidemic influenza affecting the lungs. It may be epinthropoty, la grippe, bronchitis, catarrhal fever, or influenza. It makes but little difference so far as the name is concerned, the tendency is, after the acute stage has passed, for a sub-acute inflammation to remain in the lungs. At first there may be no cough or pain, but a careful examination of the lungs, by a person competent to make the examination, will reveal the fact that the disease still exists in them.

The persons afflicted will say that they do not feel right, without being able to give any definite reason. They have lost their former vigor and ambition, and to fol-

low their daily occupation requires an effort or an exertion which was not the case formerly.

Cases of this kind show whether the medical adviser is a smart, progressive physician who is up, not only with the science, but the sign and symptoms of the times as well. If he is, on a careful physical examination of the lungs, he will find, instead of a normal vesicular murmur, producing a sound like the gentle zephyrs sighing through the summer foliage, a broncho-vesicular murmur with the characteristics of a gentle winter zephyr passing through a forest with a slight increase of tension.

This is the opportune time, and no physician should now allow a patient to drift into confirmed consumption; if he does he should be held responsible for it, for the chemical treatment would not only check this tendency but would eradicate the disease.

Consumption has been considered the unconquered destroyer of the human race, but now, if the chemical treatment is used in the proper manner at the proper time there is no doubt it will become a rare disease.

This may seem a bold statement, but we say it intentionally and mean it. It must be remembered, as we have stated in our original article, that pulmonary consumption is a disease which invades the lungs because the oxidizing elements of the body have been changed, reduced, or do not exist in the proper quantity and quality. A deficiency in these elements means a decrease in oxidization, and this lowers vital action and lessens organic metamorphosis. The protoplasm is not sufficiently oxidized to take on a higher vital action, or to be disintegrated previous to excretion.

A person may be born with this deficiency of the oxidizing elements in the system, but the inharmony thus produced may not increase enough to cause death for a number of years. The condition exists, and all that is required to produce the disease at any time is the neces-

sary exciting cause. A similar condition may be acquired from catching cold.

The important question is, can we get rid of this tendency or condition? Formerly this question had to be answered in the negative, but now it can be answered in the affirmative.

To correct the disparity that exists between the oxidizing elements and the system requires a medicine that will act on the blood and be in fact a blood purifier. The blood must be in a healthy condition. It must also act on the liver and kidneys so that they will secrete, excrete and eliminate properly.

A medicine to prevent the development of, or cure either hereditary or acquired consumption must correct the faulty oxidization that exists, and to do this it must act on the blood, liver and kidneys in such a way that the effete products will be eliminated and the organs placed in a healthy condition, so that they will perform their functions in a normal manner.

The chemical treatment does this, but to do so it must eliminate the cause, and when the cause is removed the disease must necessarily disappear. We repeat our former statement and say, that if the chemical treatment is used at the proper time and in the manner indicated by the directions, consumption would be a rare disease.

This treatment brings certain forms of consumption in a line with the simplest diseases we have to treat. The chemical action in these cases is prompt, rapid and permanent.

First Stage of Consumption.

In the incipient stage, as a rule, the patient notices an amelioration of the symptoms within a day or two after commencing the treatment, and by the end of a week he can see a general improvement. In this stage, where

there are no complications, there is a rapid improvement, and in a month or two all of the symptoms of lung trouble have generally disappeared, and the patient is restored to health.

Second Stage of Consumption.

In the second stage of the disease, after the treatment has been properly carried out for one week, the night sweats are generally much less, or have ceased altogether; the cough is easier, less frequent, and not so troublesome at night; the expectoration is thinner and not so free. By the end of the second week the pain in the lungs, in those cases where it exists, is generally much less; the appetite has improved, the exudate in the air cells, causing consolidation, is being absorbed; the breathing capacity is increased and the shortness of breath correspondingly lessened. At the same time the heart beats less frequently, respiration is not so hurried, the fever abates and the nights are passed in restful sleep. Gradual but certain improvement follows, and it is simply a question of time until recovery takes place.

Third Stage of Consumption.

At the same time that in this stage all of the symptoms are more serious and the prognosis must be guarded, yet there is generally room for hope. While the *chemical treatment* can not restore lung tissue that has been destroyed, yet if there is a sufficient amount of breathing capacity remaining, a large amount of the exudation that is blocking up the air cells may be absorbed, inflammation and irritation may be removed, and from apparently a hopeless negative condition a sufficient amount of positiveness may be restored to the system to carry on vital action, and life may be prolonged for an indefinite length of time, with a comparative degree of ease and comfort.

If a patient in the third stage of consumption is placed upon this treatment it must be done with the distinct understanding that we do not claim that it will restore an organ to a normal condition after the disease has destroyed its functions beyond a given limit. We can say, however, that after testing the chemical treatment in apparently hopeless cases of consumption in the third stage, that it gives prompter and greater relief from suffering and pain, and better results than any other treatment known to the medical profession.

Results of the Chemical Treatment in Asthma and Chronic Bronchitis.

Some physicians say that there is no such a thing as a specific in medicine; but if there is, then we shall claim that this treatment is a specific in all cases of uncomplicated asthma, without any reference to the length of time that the disease has existed. As a rule, there is a decided amelioration of all the severe symptoms in a week. Even in those cases in which there exists a **chronic bronchitis**, with a muco purulent expectoration, the end of the first week generally finds this condition improved. In uncomplicated cases of asthma we consider that it is only a question of comparatively a short space of time until the disease is cured provided the directions and treatment are properly carried out.

Catarrh and Hay Fever.

Reasoning from the same basic theory, we have instituted a chemical treatment for **catarrh** and **hay fever** which has given as satisfactory results in these diseases as we have had with consumption and asthma. In these diseases we use the atomizer instead of the inhaler. We also give tablets and a constitutional medicine. It should be understood that, although the treatment in

all these diseases is the same in general plan, yet the medicines differ in each to correspond with the disease and the condition of the patient.

A brief review of these diseases will better enable us to present our customary method of diagnosing them.

ASTHMA.

Asthma is a disease that is characterized by periodical attacks of difficult breathing, the dyspnoea being caused by a spasmodic contraction of the muscular coat of the smaller bronchial tubes. The bronchioles having a more abundant supply of muscular structure than the larger bronchi with a much smaller caliber and connecting directly with the air cells, it can readily be seen that a small amount of contraction would have a decided influence upon the passage of air through them. In extreme contraction a small amount of air may be forced through the constriction into the air cells, but only a portion of this air can make its escape.

The reason why this is true is because the inspiratory effort has more power than the expiratory. The result is that more air is forced into the cells than passes out and as a consequence they are over-distended producing an emphysematous condition. If this distention is kept up for some time, the septae are gradually obliterated and the elastic or contractile fibres of the air cells are destroyed.

The natural cell is lobulated, the contractile fibres being attached to the septae which gives it this shape. When the cells are distended with air these fibres stretch, and then by their contraction aid the thoracic muscles in the act of respiration.

By long continued or oft repeated over-distention these fibres lose their contractility, and when the septae are broken they may be partly or even completely detached and then their function is destroyed. The

cells then instead of being lobulated are round and larger, constantly containing more air than normal, producing an emphysematous condition. The percussion note is then more resonant than normal. In extreme cases it is drum like, or tympanitic in a thin chest wall.

The causes that produce asthma may be divided into two general classes; viz., the direct and the indirect.

The direct are those which act upon the mucous membrane such as cold, exposure, getting wet, smoke, fog, dust, emanations from plants, flowers and animals, odor of burnt sugar, fumes of sulphur, acids and sealing wax, dust of various drugs such as ipecacuanha, chemical irritants, etc.

Bronchitis is the cause in probably 80 per cent. of the cases. After an attack of measles, whooping cough, pneumonia or pleuro-pneumonia the bronchial mucous membrane may be left in an irritable condition, which, after a period of latency, may gradually increase until an asthmatic condition is developed.

We do not wish to convey the impression that asthma will follow immediately after convalescence from these diseases. The sensitive condition of the mucous membrane induced by them may continue and afterward gradually increase, but the required amount of irritability to produce a spasmodic contraction of the bronchioles may not be developed for a number of years.

The indirect causes are sometimes called reflex and act through the nervous system and the circulation. Asthma may be acquired or hereditary. The former might be direct or indirect, the latter would be indirect.

The indirect or reflex generally acts through the excito-motor system, and may be from the stomach, then they are called peptic.

Any cause that produces a functional disturbance of the stomach may result in an asthmatic attack. It is to be noted, however, that organic disease of this organ does not generally result in an asthmatic condition.

Distention of the stomach from eating or drinking excessively, certain articles of diet such as bacon, smoked sausage, ice cream, pastry, etc., may bring on a paroxysm. Irritation in the intestinal canal such as worms, hemorrhoids, etc., may be the cause.

In a youth that we treated the attacks had existed from the time that he was an infant. He had developed the peculiar barrel-shaped chest that is sometimes observed in old asthmatics who have become emphysematous. This was at first a case of reflex asthma from the intestines caused by irritation from a tape-worm.

An asthmatic condition may be the result of inflammation or obstruction in the nasal cavities, uterine irritation, etc. In uræmia and diabetes mellitus there are periodical disturbances of respiration with dyspnea. An agent circulating in the blood may produce an irritation of the nerve centers and be the cause of asthma. The type of this class is seen in lead poisoning and gout.

Certain diseases such as syphilis and eczema may act as an indirect cause for the disease. An abnormally sensitive condition of the nerve centers, either inherited or acquired may be the chief factor in the development of the attacks.

A paroxysm may be brought on by over exertion, walking fast or running, going up steps or a hill, laughing, sneezing, excitement, grief, anger, the sight of certain objects or animals.

An attack may be developed by almost anything that makes a decided impression upon the nervous system and a similar impression may abort or prevent a threatened paroxysm.

A person may have asthma in one climate and be free from it for a while in another. They may have it while living on one side of a street and have temporary immunity by changing to the opposite side. It will be seen that the causes are various and may have a different aspect in each individual.

An asthmatic attack generally comes on suddenly. There may be a prodromal period of depression or drowsiness or there may be an exhilaration and buoyancy of spirits.

A peculiar sensation partaking of the nature of a foreboding of impending danger is the premonition in some instances. In some there is an unaccountable irritability of temper and they can scarcely treat their best friends properly. Then there are those that have a degree of moroseness or sullenness that is entirely foreign to their natural disposition. Others have presentiments of various kinds by means of which they can predict the advent of a paroxysm.

The attacks occur most frequently at night, although they may take place at any time. In a paroxysm the person sits up, leans forward and gasps for breath.

There is a sensation of impending suffocation and all of the thoracic muscles are used in the efforts of respiration. The shoulders are either constantly elevated or are drawn upward during inspiration. The inspiratory effort is short, forcible and frequently gasping while expiration is prolonged and laborious. The countenance is generally pale but in severe cases the lips and face may have a bluish color.

The fremitus at this time is generally diminished from the distention of the cells with air and percussion resonance increased from the same cause. Dry rales are the most abundant in the beginning of the attack and continue until secretion takes place. Sometimes they are very loud and may be heard at a distance from the sufferer. They are not heard constantly in the same locality, but are manifest first in one place and then another. This shifting of the dry rales is one of the characteristic signs of this disease. Later the moist rales become manifest especially the sub-mucous and the sub-crepitant. All rales are heard plainer on expiration.

The ratio of inspiration to expiration is about 4 to 1 in a normal condition of respiration. During an asthmatic paroxysm this ratio is reversed. The inspiratory effort being short and strong the air is forced through the contracted tubes into the air-cells. The expiratory effort does not have sufficient power to force it back through the constriction and the cells become over-distended. The air in the cells that is thus prevented from escaping becomes charged with carbonic acid and cyanosis is the result if the paroxysm continues very long or is excessive.

The paroxysms last from a few minutes to several hours although the effects may last much longer. With the relaxation of the contraction in the bronchial tubes, secretion takes place and more or less viscid and glary mucous is expectorated after coughing. The respiration then becomes easier, the gasping for breath gradually ceases, the muscles of the chest relax, the pulse, which is small during the paroxysm, becomes fuller, inspiration becomes longer and expiration shorter until finally all of the symptoms disappear. During the paroxysm but more especially with relaxation the body may be covered with perspiration and there may be a desire to urinate. Sleep may follow and the person wake up feeling comparatively well, but the soreness and results of the paroxysm may be felt for a day or two afterward.

After the disease, whether in the inherited or acquired form continues for a time, it becomes a habit of the system or acquires an independent existence and may continue for an indefinite length of time even after the disease in the organ that was the primary cause has been removed.

Asthma has a strong tendency to a rythmical recurrence and consequently can be classed with those diseases that are periodic.

It may be associated with or occur as a result of megrim or malaria. There may be certain seasons or

periods of the year when it makes its appearance, and after existing for a few weeks may disappear to recur again when that season arrives. With a recurrence of these periods the attacks generally increase in severity and duration until a sufficient amount of irritability may constantly exist for a paroxysm to be developed at almost any time. It frequently accompanies or follows hay fever, or it may occur at that season of the year and is then called hay-asthma.

In females it is sometimes associated with the monthly sickness and may occur or be worse at that period. In those cases where the attacks occur at stated periods, there is a paroxysm or a series of them when the disease appears to exhaust its force, then there is a period of immunity until the force has been regenerated or redeveloped. In some, this condition of irritability exists continually, and a suitable exciting cause will develop a paroxysm at any time.

It is common for the attacks to occur at night. This would indicate that there was an electrical condition of the atmosphere at night more favorable for its production than in the daytime. Darkness itself is a cause, and many persons cannot sleep without a light in the room. The action of the atmosphere may be an element in the production of an attack in some cases. When it is quiet they are free from any symptoms of the disease, but wind, especially a high wind will precipitate an attack. The direction in which the wind is blowing has the peculiar influence that will develop a paroxysm in some persons.

A disease like bronchitis may be developed from exposure. Apparently all of the pathological effects produced by it disappear, and the person is restored to a normal condition of health. However the bronchitis may have developed a morbidly sensitive condition of the nervous system in the mucous membrane of the respiratory tract, which remains in a latent form. Then,

not only cold, dust, fatigue, etc., but subtle agents may act as irritants and develop the disease, which, in a normal condition, would have had no effect.

CHRONIC BRONCHITIS.

The bronchial tubes are divided into three classes, viz. the larger, medium, and smaller or capillary, sometimes called bronchioles. Bronchitis means an inflammation of the mucous membrane of the first and second varieties, but not of the third. When the smaller bronchial tubes are the seat of inflammation it is called capillary bronchitis, and occurs more frequently in children and the aged and debilitated. The air cells are not involved in bronchitis, nor in the capillary form, unless as a result of some complication.

The inflammation may not be confined to the mucous membrane, but frequently extends to the walls of the tubes and the surrounding connective tissue.

Bronchitis is a disease that affects both lungs. When a pathological condition exists only in one lung it must be remembered that it can not be bronchitis unless it is secondary to some other disease. Pneumonia frequently involves only one lung, and bronchitis may exist in connection with it.

Chronic bronchitis may exist as such from the beginning or it may follow the acute variety, it is also frequently associated with or the result of organic disease of the heart or chronic lung trouble. It may be developed as a result of other diseases, such as Bright's disease, albuminuria, scrofula, rickets, etc. It is common in those who have a cachectic diathesis.

A mental trait or a peculiar form of nervous sensibility in the parent may make a similar impression upon the nervous system of the child. So scrofula, consumption, chronic bronchitis, etc., in one generation may be transmitted to the next. They may not each in turn develop the same disease, but any one of them may furnish the

predisposition for the same disease or either of the others. Consumption and chronic bronchitis transmit a predisposition to disease of the mucous membrane, especially of the air passages, and we see this exemplified in the children of such parents. There may be an immunity for a number of years, but frequently with the change from adolescence to manhood or womanhood, or from some special exciting cause, the disease shows its influence upon the system.

This would indicate that there is a vital principle existing in every living being in a form capable of transmission from parent to offspring, and that it is sufficiently powerful to make its intrinsic quality become manifest. It also has the inherent power of affecting the system in such a manner that it will produce a given disease, or one that is associated with a similar cause. It may skip one generation and the next one be dominated by its influence.

In females the catamenia are frequently delayed beyond the normal age, or, if it has occurred, it is easily deranged or ceases altogether without apparently any tangible reason except under the comprehensive terms of debility or anæmia.

Syphilis and diseases of the skin in one generation may be followed in the next either by chronic bronchitis or pulmonary consumption, or the children of such parents contract these diseases from exciting causes that in others would not produce them. Alcoholism is a cause of the disease due principally to the exposure and neglect that accompanies it.

It may occur in winter from the effect of the cold air upon the bronchi and disappear with the advent of warm weather. After a few years it becomes established and will then continue constantly without any reference to temperature or the season of the year.

It may be developed from exposure, inhalation of irritants, such as dust, gasses or fumes from acids and

chemicals. It may follow as a sequelæ after any of the continued fevers, rheumatism, etc.

Stone and marble cutters, polishers, buffers, knife-grinders, etc., by constantly inhaling the dust are not only frequent sufferers from chronic bronchitis, but if continued may develop asthma or consumption. Firemen, stokers, puddlers, glass workers, and all those who are exposed to a great heat and afterwards to cold air or a draft are liable to contract colds which are followed by inflammation of the pharyngeal and bronchial mucous membranes. After an attack from this source the parts are more easily influenced by a repetition of the cause. As this class are frequently exposed to great variations in temperature, they are in a suitable position to have chronic bronchitis as a result of "catching cold" so often. People who work in shops and factories where there is much dust and smoke generally have more or less congestion of the bronchi. The congestion may remain in a sub-acute or chronic form for an indefinite length of time without causing very much distress. There will be some cough and expectoration, but as a rule little or no increase in the pulse rate or temperature. They are, however, in a condition to be easily influenced by exposure when an active congestion will follow. The inflammation then extends through the bronchioles into the air-cells. The excessive congestion in the bronchi may subside in a few days leaving them in about the same condition as before with the addition however, of a similar condition in the air-cells, thus producing the first stage of consumption. From this it can readily be seen how a chronic bronchitis may from exposure to any cause that will add an additional irritation to the already congested and hyper-sensitive mucous membrane develop phthisis pulmonalis.

A chronic bronchitis may exist as such for months, the inflammation being confined to the tubes. Apparently the general health of the individual is not noticeably

influenced by the disease. However, certain changes have been gradually taking place. The inflammation not only produces thickening of the mucous membrane thus lessening the caliber of the tubes and interfering with the free passage of air through them, but extends to the bronchial cartilage causing an inflammation of that structure which weakens them. It may then pass to the peri-bronchial connective tissue causing infiltration and thickening in the latter. The tubes being thus weakened by the disease are dilated by the violent attacks of coughing. The dilatation may be uniform like a cylinder, tuberos, or there may be an ampullar or sac-like enlargement.

When the cartilage has been attacked by the disease the symptoms are more pronounced, the breath has an offensive odor with frequently a greenish color in the expectoration. Another cause for the disagreeable odor in the breath is from the secretion remaining in the sacculated dilatations and undergoing a partial decomposition.

When there is much thickening of the connective tissue it presses upon the bronchial arteries lessening the nutrition of the parts, increasing the venous congestion and favoring disintegration and the formation of pus. If this condition exists along the bronchioles and extends to the air-cells then pulmonary consumption is the result.

There is a close relationship between chronic bronchitis and consumption. We might have the former without the latter, but in consumption there is nearly always more or less chronic bronchitis.

The secretion in chronic bronchitis consists of exuded and changed leucocytes, serum, mucus, cast off epithelium, pus and disintegrated organic elements.

In the moist or humid form the secretion may be very abundant. The paroxysms of coughing are not so severe as in the dry form, as the exudation is more fluid and

larger in quantity so that it is more easily dislodged and expectorated.

The cough is generally worse at certain periods, especially in the evening when day-light is merging into darkness, just after lying down at night and in the morning. The expectoration may be gelatinous in character, it may have a straw color or a greenish appearance.

In the dry form there are violent paroxysms of coughing with but little expectoration. The cough is the most decided symptom. On account of thickening of the bronchial mucous membrane from the congestion and the viscid secretions adhering to it, there may be **dyspnœa on exertion**.

Inspection does not show any difference in the two sides of the chest in chronic bronchitis, respiration and expansion being the same. Unless produced by a collection of the secretion or infiltration of the connective tissue, there is little or no change in the fremitus. The percussion note is practically normal although there may be some increase in the tension. In some cases of long duration with thickening of the peri-bronchial structure there may be a dullness of the normal resonance. The respiratory murmur may be lessened by the secretion but when this is removed by coughing it is restored.

Expiration is generally prolonged and harsher than normal. There is little or no reduction in weight, strength or physical endurance.

There are two kinds of rales heard in bronchitis—the dry and the moist. The dry are the sibilant and the sonorous. The former are high-pitched, whistling in character and located in the smaller and medium sized tubes. The sonorous rale is lower pitched, has more of a musical tone and are formed in the larger tubes. The dry rales are produced either as a result of the congestion of the mucous membrane before exudation has taken

place or from the air passing through tubes containing viscid mucus, and are heard chiefly at the commencement of the disease or in the dry form.

The moist rales are either sub-crepitant, sub-mucous, or mucous. The sub-crepitant are made in the smaller bronchi, are of a fine crackling character and are heard chiefly on inspiration, although they may be heard during expiration. The sub-mucous rales are in the medium sized tubes, have a bubbling character and are heard both on inspiration and expiration. The mucous rales are in the larger bronchi, produce a bubbling sound and are also heard both on inspiration and expiration.

Differential Diagnosis - Asthma.

In making a differential diagnosis between two diseases the history of the case must always be taken into consideration. Quite frequently that will give presumptive evidence of the nature of the disease.

The following are the principal symptoms by means of which asthma may be diagnosticated from other diseases. The suddenness with which it makes its appearance at any time, day or night, frequently without any apparent cause. The constant elevation of the shoulders or the drawing of them upward at each act of inspiration during a severe paroxysm. The violent efforts in breathing with short and free inspiration but prolonged, wheezy and laborious expiration. The impending sense of suffocation during the paroxysm. Cyanosis during the attack passing off with the latter. Loud and shifting rales with slowness of respiration and small pulse. Increased resonance during the paroxysms returning to normal after it has disappeared. Secretion viscid with an entire absence of purulent products and very little of the watery element.

There is no change in the voice and no rise in temperature, consequently a complete absence of fever. The

rapidity with which all symptoms disappear leaving the patient apparently in his usual state of health.

In laryngeal affections there is prolonged and difficult inspiration with easy respiration and no rales in the chest. In edema of the glottis the prolonged and difficult inspiration is accompanied by a crowing sound while expiration is free and without any noise.

In cardiac dyspnea the paroxysms may be severe and resemble those of asthma, but the absence of rales in the lungs and freedom from the prolonged and wheezy expiration together with evidence of disease of that organ would be sufficient to differentiate between them.

Emphysema has increased resonance existing all the time, although it may be more pronounced during a paroxysm. The conformation of the chest being more or less barrel shaped; displacement of the heart and the readiness with which the paroxysms are developed together with the physical examination would reveal the nature of the disease.

Chronic Bronchitis.

Chronic bronchitis is a disease that involves both sides of the chest. There is very little if any change in the tremitus. The tension may be increased but the percussion note remains practically unchanged. Sub-crepant and subcrepitant rales may be heard in both lungs. In the humid form the mucous rales are present at certain times but not constant.

In the dry form the sibilant rale and occasionally the sonorous exist, but they are not shifting as in asthma. In uncomplicated cases there is no fever.

Respiration is generally harsh and at times the vesicular murmur may be obscured by the secretion but when the latter is removed by coughing then the former returns. There is no consolidation of any part of the

lungs, consequently there is no bronchial breathing. There is no retraction and the depression under the clavicles (if there is any) is uniform on both sides.

There may be loss of weight in some cases, but it is not progressive. At times during the course of the disease, there may be some sub-sternal pain and a sense of constriction across the chest.

Occasionally there may be a thread-like streak of blood in the expectoration but no hemorrhage.

Unless there is a dilatation of the bronchi, which is not common, there will not be much trouble in making a diagnosis of chronic bronchitis. In those cases where fibroid phthisis is the result of chronic bronchitis, it is sometimes difficult to draw a line of demarcation between them.

CATARRH.

Catarrh is a disease that can exist in any organ that is lined with a mucous membrane. We may have a catarrh of the pharynx, stomach, intestines, etc. We shall refer to the form that involves the nose and is known as chronic nasal catarrh commonly designated simply by the word catarrh. When the expression "I am troubled with catarrh" or "I have catarrh" is used, it is understood that the nose is the organ referred to.

Chronic nasal catarrh is a disease affecting the lining or mucous membrane of the nose. The mucous membrane in this locality is sometimes called the Schneiderian or pituitary membrane. The latter name is given on account of the character of the secretion. The ancients supposed that the secretion was a flux from the brain through the ethmoidal foraminae, but Schneider demonstrated that it was from the mucous membrane of the nose itself. This is the reason why it is called the **Schneiderian membrane**.

On account of its mucous membrane containing the

terminal filaments of the olfactory nerves the nose is called the organ of the special sense of smell. It is also the special organ through which the air should pass to the lungs, as the mucous membrane is endowed with the property of preventing, to a certain extent, the introduction of noxious agents into the lungs. On account of this function people can inhale choke-damp or the effluvia from poisonous reptiles through the nose with safety that otherwise would be lethal in their effects.

This disease is frequently the result of an hereditary predisposition and a person may be born with the catarrhal diathesis. Gout and lithæmia are diseases produced by the action of morbid or foreign agents in the blood which predisposes the Schneiderian membrane to congestion. Defective nutrition and debility following the exanthemata as well as the inhalation of irritants are frequently the chief factors in the production of rhinitis.

During the earlier part of the disease the mucous membrane may have a velvety appearance, but later this may disappear as the result of sclerosis. Respiration through both nostrils at the same time seldom occurs, but when one side is free the other is occluded. The passing of the secretion from the posterior nares into the throat is one of the most annoying symptoms. The frequent hawking to remove it keeps the pharynx in a constant state of irritation. When the disease extends to the superior portion of the nose the inflammation may involve the connection between the terminal filaments of the olfactory nerves and the mucous membrane and the sense of smell be partially or completely destroyed.

Nasal catarrh may be the cause of inflammation of the pharynx, larynx or bronchi. It involves the pharynx commonly and the larynx frequently by extending along the mucous membrane from one organ to the other. It might develop bronchitis in a similar manner or it might be from the loss of the normal con-

dition of the nasal mucous membrane. The Schneiderian membrane in its healthy state is constantly moist with its own secretion. When a current of air passes through the nostrils it carries with it dust and irritating agents. These particles are brought in contact with the moist surface and adhere to it being thus retained in the nose. In chronic nasal catarrh there is frequently a hyperplasia of the mucous membrane followed by sclerosis so that the erectile tissue and membrane are dry. Then the dust and foreign particles in the atmosphere are carried into the pharynx, larynx and bronchial tubes where they act as irritating agents. As the irritant is kept constantly acting it can readily be seen how inflammation of these organs may be the sequence.

From the nose the inflammation may readily extend by continuity of structure through the Eustachian tube to the cavity of the tympanum. In a normal condition the Eustachian tube is patulous and in every act of deglutition the middle ear is ventilated. When the lining membrane of this tube is congested the natural ingress and egress of air to the tympanic cavity is inhibited and a condition of catarrhal deafness is developed. In addition to the cophosis or deafness there may be tinnitus aurium, aural vertigo, and a peculiar sound in the ear when speaking—a reflexion of the voice.

Chronic nasal catarrh is commonly derived from the acute variety which is most frequently the result of "catching cold." A person from exposure takes cold and as a sequence has acute nasal catarrh or coryza, ordinarily called a "cold in the head." In this condition the mucous membrane of the nose is congested and swollen. The swelling may be sufficient to close the nasal passages and respiration is performed through the mouth. There is a free watery discharge secreted which requires frequent blowing of the nose. Most of this discharge comes out of the anterior part of the nostrils but a portion of it passes down into the pharynx. With this

condition there is frequently a congested condition of the conjunctiva the eyes being red and watery. There is headache from congestion of the frontal sinuses, the pain extending across the forehead, and generally an irritated condition of the throat.

This condition may last for a few days and then gradually pass away. From exposure again a similar condition is developed more easily than at first until after a few repetitions the congested condition does not pass off entirely but remains constantly in a sub-acute or chronic form. The vessels being over-distended in the acute form do not contract to their normal size but remain slightly dilated and contain more blood. The congestion weakens the walls of the capillaries and transudation of plastic material, serum and leucocytes from the blood is easier. Some of the plastic material enters the connective tissue and causes thickening and induration. There is more or less disintegration of the cellular structure and change of leucocytes into pus, and this together with the serum and glandular secretions forms the discharge that is almost always present. It may be thin, mucoid or watery and it may be viscid or purulent. It may be formed in the front part of the nose and escape anteriorly or it may come from congestion in the back part of the nasal cavities and escape posteriorly into the pharynx where it will be observed as a grayish streak extending from behind the soft palate down the posterior wall of the throat.

In almost all cases of chronic nasal catarrh there is also a chronic pharyngitis, the mucous membrane of the throat being red and congested and easily irritated. The discharge passing from the posterior portion of the nares into the pharynx produces a tickling in the throat from its mechanical effect and an effort is made to remove it. It may be of an acrid character and would develop irritation from this property. In others it acts as a foreign body producing an uncomfortable sensation

and an effort is made to dislodge it. As it is viscid it requires repeated efforts before it is removed, and the hawking and coughing that is required for this purpose aggravates the irritation already existing in the throat.

Certain occupations, especially those where there is much dust favors the development and continuation of this disease. Hence, it is quite common in factories where the employees are shut up in the building. After the local congestion and irritation have been developed in the mucous membrane it may remain after the exciting cause has entirely disappeared.

It simply requires a cause for its production and acquires an independent existence and is then no longer dependent upon the primary cause for its continuation but furnishes its own irritation from the congested condition of the parts involved.

As a rule in chronic nasal catarrh the mucous membrane is red and congested and may have a velvety appearance over the turbinated bones. This is not always the case, for in some instances the membrane is pale, with little or no secretion producing a condition that is known as dry catarrh. This is generally observed where there has been hypertrophy as a result of an active congestion with induration following. This contraction lessens the amount of blood in the vessels and prevents surface secretion. Sometimes in the aged and debilitated with a relaxed condition and lowered vitality of the system there is a free watery discharge without much thickening or congestion of the membrane.

In some instances there is a large quantity of a whitish or creamy discharge blocking up the nostrils, requiring them to be freed from it every few minutes. Part of this is expelled through the anterior part of the nose by "blowing it" and quite a large amount is removed by drawing the air in forcibly through the nose and then hawking afterward.

When the inflammation extends deep into the tissues

the discharge may have a greenish color and a very unpleasant odor. This condition is liable to follow the exanthemata such as measles, scarlatina, diphtheria, etc. It is also found in that class in which there is a tendency to glandular enlargements as seen in the scrofulous diathesis. There being a large amount of secretion it accumulates and fills the various cavities and sinuses in the nose where it remains until decomposition takes place. The odor then is very offensive and may be noticed not only by others, but by the one who has the disease. The discharge may partly dry up by evaporation and form crusts or scabs which may be removed either anteriorly or posteriorly through the mouth depending upon their location. There may be abrasions or ulcers of the mucous membrane and blood be mixed with the discharge.

The discharge frequently collects on the sides of the septum in the anterior part of the nose and by evaporation form a scab which adheres firmly to the mucous membrane at this point. As it produces an unpleasant sensation an effort is made to remove it by picking with the finger nail. In loosening it the mucous membrane is scratched or broken and some blood escapes. These crusts continue to form and are removed every day in a similar manner until the abrasion in the mucous membrane has developed into an ulcer which spreads in circumference and extends in depth. In a comparatively short time the ulcerative condition extends down to the periosteum and that structure is destroyed at this point and then the inflammatory process attacks the bone itself. The ulcers quite frequently form on both sides of the vomer, directly opposite each other, at the same time. This ulcerative process continues until both the mucous membrane and the bone are destroyed making a hole in the septum. From this opening the necrosis may extend until the entire vomer and the tissues

covering it have been destroyed and removed leaving a large cavity without any septum.

In the fetid or strumous catarrh, generally called ozena, the discharge has a very offensive odor. As we have already stated it exists in persons with the serofulous diathesis or follows the eruptive fevers. It may also be due to a specific cause and is sometimes seen in syphilitic subjects.

Polypi may be formed in any portion of the nasal cavities but the middle turbinated bone is most frequently the seat of these tumors. The chronic inflammation appears to have an effect on this bone different from the others. It divides the bone into two parts along the line of embryonic union, pathological changes take place and granulations spring up which later develop into the soft or mucous polypi. These tumors may grow in the post-nasal region or in the vault of the pharynx and have a dendroid appearance.

A deflection of the septum may be the principal cause for the occlusion of one nostril while the cavity of the other one will be correspondingly enlarged. Later there may be cartilaginous growths in various parts of the nose or bony spurs from the vomer that will interfere with the passage of air through the nostrils.

HAY FEVER.

Hay fever is a disease that involves the nasal mucous membrane presenting in many respects the symptoms of acute coryza. It is not considered to be an inflammation in the ordinary usage of that term, but is characterized by periodical recurring attacks of a turgescient condition of the Schneiderian membrane due to a paresis of the venous sinuses of the turbinated bones and of the vomer. In this condition the vessels are congested and their walls relaxed so that serum escapes in large quantities producing a free watery discharge.

These periodical attacks may occur in May, June, July or August, and even as late as September. From this fact quite a variety of terms are used in expressing the condition, such as rose cold, June cold, summer catarrh, rag weed catarrh, autumnal catarrh, etc., indicating either the source of the disease or the season when it occurs. The exciting cause in the development of the attacks is considered to be due to the pollen of grasses, flowers or plants coming in contact with the nasal mucous membrane.

It is evident that all hay fever sufferers are not affected by the same cause, otherwise in a given locality they would all be afflicted at the same time. Some have the disease developed as soon as the pollen from the June roses are in the atmosphere, and are not troubled in the summer or fall. Some are not influenced by the emanations from the rose, but the disease manifests itself in July or the early part of August when the pollen from grasses are prevalent, especially new mown hay. Others again will pass by these two periods and not be influenced until the rag-weed season arrives producing the autumnal variety.

There are some peculiar sensitive people who are influenced by all of the above varieties and are scarcely free from their rose cold or June catarrh until they have a fresh out-break in July from the grasses and later they have an other attack from the weeds.

The summer and autumnal varieties generally continue until the cold weather in the fall. The hay fever subjects expect to be annoyed with the disease until frost has made its appearance when it disappears.

There have been a number of experiments made by different persons to demonstrate that pollen is the exciting cause of the disease.

Dr. Blackley was a hay fever subject, and he proved by a simple experiment that pollen was the exciting cause in his own case. For the purpose of demonstra-

tion he took a small metal plate about one-third (one centimetre) of an inch square, moistened it with glycerine and exposed it in the open air so that the wind would blow upon the surface. The pollen being brought by the wind in contact with the glycerine would adhere to it and could then be counted.

In the early part of the season the number of pollen grains thus caught would not be very large but would gradually increase until the 10th of June when the number deposited on the disk in twenty four hours would be two hundred and seventy five or more, then his attack would be fully developed. It would continue until the test would show that the pollen were decreasing in the atmosphere when the hay fever symptoms would gradually subside.

As the pollen act only as the exciting cause there must be other elements that enter into the development of the disease. Dr. Beard says that in all these cases there is a hereditary neurosis, and that the family history will reveal some form of nervous disease; that the parents or grand-parents had hay fever, asthma, chorea or a strong predisposition to some form of neurotic trouble.

Dr. Daly called attention to the condition of the nasal cavities in hay fever, stating that they were in an irritable condition and easily influenced by an exciting cause.

The heat of the sun's rays, inhalation of smoke, fumes, dust, etc., may act as the necessary additional irritant that is required to bring on an attack. The ordinary road or street dust is a common cause, which, besides its mechanical and irritant action may contain a large number of pollen grains.

A peculiarity of the disease is that many of the victims can predict the very day, and even the hour, when the hay fever attacks will begin. As there is considerable variety and change in the seasons it is hardly

reasonable to suppose that a given plant, flower or weed would be ready on exactly the same day of each year to give its pollen to the wind. It is to be noted however, that upon the day affixed the disease becomes manifest.

The disease has also been produced in some individuals by the smelling of an artificial rose of the variety that they knew was the cause of their attacks. A paroxysm has been induced by a hay fever subject gazing upon a landscape painting with a hay field in the picture. It is very evident that the psychic sense was active and brought to the mind a vivid and impressive realization of the effects produced by the objects presented.

Hay fever is not confined to the nose but the eyes, mouth, pharynx, larynx and bronchi are more or less all involved. The conjunctiva, both palpebral and ocular are congested resembling a conjunctivitis, but the discharge is watery, whereas in the latter it is purulent.

There is a sense of burning or itching in the former that does not necessarily exist in the latter. A common symptom in conjunctivitis is the sensation as if sand or dirt were in the eyes. This is due to the swollen, enlarged and roughened papillæ, a condition that is not common in hay fever.

There is photophobia, and the light not only increases the irritation and flow of tears but may develop headache. In some cases there may be swelling of the lids and chemosis. As a rule the ocular symptoms are external but occasionally some of the structures within the eye become involved.

The mucous membrane covering the roof of the mouth becomes involved and there is an itching, sometimes a stinging pain, in this locality which is occasionally very annoying. These symptoms are probably caused by the congestion in the posterior portion of the nose pressing upon the sphenopalatine branches that

terminate in the roof of the mouth. The irritation may be transmitted to the terminal filaments, or it may render the latter more susceptible to the action of pollen, dust, etc.

The pharynx, larynx and bronchi are more or less involved either from extension of the irritation from the nose, or from the pollen, dust, etc., coming in contact with the mucous membrane of these organs. An infusion made from pollen grains and applied to the conjunctiva, mouth or throat of a hay fever subject will produce the congestive symptoms, in those parts, of the disease.

The subjects of hay fever generally belong to the more intellectual classes, those who lead sedentary lives and spend the major portion of their time in their places of business. Those who exercise the mental faculties more than the physical develop the former at the expense of the latter. The sympathetic becomes more sensitive to impressions and the vaso-motor system weakened and more easily influenced.

This is shown in this disease by the relaxed and turgescient condition of the Schneiderian membrane which is different from an active inflammation. On ocular inspection a condition resembling acute inflammation in many respects is presented, but the discharge is different in character and reflex symptoms are present.

People who spend the principal portion of their time out of doors, and especially at manual labor, are not so susceptible to the disease. The inhabitants of cities are more predisposed to it than those of the country. Yet an out-door life does not give complete immunity and the farmer, teamster or laborer may be subjects of the disease, especially of that form produced by hay or weeds.

The first season that a person has hay fever it may be mild in character, but with recurring attacks it generally becomes more severe. Asthma is a complication that

presents itself in the majority of cases at some period during the season. At first it is during the second or third week and then gradually takes place earlier until it may commence with the hay fever. In some cases the hay fever element exhausts itself, or is over-powered by a more extensive and influential disease and asthma occurs in its place.

In such cases the asthma is periodical and only presents itself at the hay fever season. After awhile the asthmatic period is extended and does not cease with frost but may last until December or January or even all winter, and not disappear until spring. This change from the hay fever to the asthmatic habit is not uncommon, the seat of sensitive susceptibility being transferred from the nose to the lungs.

In the nose there are localities where irritation is more apt to be followed by reflex symptoms than others. Two of these hyperæsthetic spots are connected with the inferior turbinated bone, one at the posterior and the other at the anterior extremity. If these localities are irritated mechanically in a hay fever subject, sneezing and other reflex symptoms follow.

A similar mechanical irritation may be developed in the nose. The congestion of the blood-vessels causes swelling and the mucous membrane of one side may come in contact with that of the opposite side. It is known that two inflamed mucous membranes in contact mutually irritate each other.

In the nose we not only have contact from turgescence, but the air in respiration causes a separation of the inflamed parts or a sliding movement of the membranes on each other. This in the susceptible subject is sufficient to provoke reflex symptoms. Irritation of the posterior sensitive spot may produce coughing or asthma by reflex action through the vagus.

There are some sections of the country that are supposed to be free from the disease. These localities are

considered to be either too high for the pollen or else so far from the plants producing them that they are not carried to these places. However, in those sections that claim immunity from the disease, occasionally a subject has an attack, either from memories of the past or conditions of the present.

In all cases there is a peculiar nervous susceptibility in the individual, and unless this is corrected he will have hay fever when exposed to the common exciting causes. The disease rapidly acquires a habit and this condition must be broken up, or the cause underlying and producing it must be removed from the system.

A polypus or a foreign body in the nose may furnish the irritation that will result in the development of the disease. It is not generally observed in cases where there is a decided destructive process taking place in the nose such as cancer, syphilis and ozena where the bones are involved. The more potential or destructive organic disease over-powers or prevents the lesser or functional one.

The action of the pollen grains on the mucous membrane cannot be that of a purely mechanical irritant. If it was then dust would be the most prolific source for the exciting cause. It cannot be due to any acrid principle in them for examinations show that they do not possess this property. They probably act on the peripheral filaments of the vaso-motors causing a relaxation amounting to a paresis of the turbinated veins at the same time producing excitation of the sensory nerves. This would account for the turgescence or swollen appearance of the membrane, and the transudation of the serum from the blood.

The congestion of the membrane would increase the excitability of the nerves distributed in it and pressure upon these hyperæsthetic filaments would produce the reflex phenomena observed in these cases.

Certain conditions of the system may be a factor in the

production of the disease. A gouty, rheumatic or lithæmic diathesis frequently develops a condition in the nasal mucous membrane that is favorable for the production of the disease from an exciting cause.

Symptoms - At first there is an uneasy sensation in the nose, which soon partakes of a tickling or itching character. This is followed by attacks of sneezing. At first the sneezing is only occasional, but as the disease develops they occur more frequently.

If the attack is mild all the symptoms will be of a modified form. If severe, then in addition to the congestion of the nasal mucous membrane, which will cause violent fits of sneezing, there is a burning or itching sensation about the eye lids. The eyes are red and watery, with considerable conjunctival congestion. The light may increase the ocular irritation, so that it becomes necessary to remain in the house, or even in a dark room. The turgescence in the nose increases until after one or both nostrils are completely occluded. If lying on the side, the upper passage will be open and the lower one closed; or if on the back, both may be obstructed and respiration will be performed through the mouth.

A free watery discharge comes from the congested nasal mucous membrane, and is very annoying, requiring almost constant efforts to remove it. At first this discharge is thin and clear, later it becomes thicker and opalescent from admixture with mucous and glandular secretions.

A tickling or itching sensation in the roof of the mouth is a source of much discomfort.

With the advent of the attack there may be chilly sensations alternating with slight fever, headache and ringing in the ears from congestion in the Eustachian tubes. The disease may extend from the nose to the pharynx, producing irritation in the throat, to the larynx resulting in hoarseness of the voice, or to the bronchi.

causing cough. The irritation in the bronchial tubes partakes of a reflex periodical nature, and as a consequence asthma is generally present at some period during the hay fever attack.

These symptoms continue with more or less intensity until frost, when they cease generally as abruptly as they began. In uncomplicated hay fever, the subject is then free from the disease until the next season arrives.

There are a few symptoms that sometimes precede the disease for several days or even weeks. One is an undefined uncomfortable sensation in the nose, which increases as the season approaches. Another is a tickling sensation in the roof of the mouth. There may also be an irritation of the conjunctiva, especially at the inner corners of the eyes. The mucous membrane of the nasal septum frequently presents a wrinkled appearance and in some cases has a grayish cast. This condition may be observed several weeks previous to the advent of the disease.

Preliminary Tests

MADE BY LEADING CINCINNATI PHYSICIANS,

(ORIGINAL CLINICAL TEST CASES.)

CONSUMPTION.

Case I.—Mrs. Kane. Previous duration of disease, four months. Father died of hasty consumption. Symptoms: cough, expectoration, fever, rapid loss of flesh and strength, loss of appetite, dyspnea and palpitation. Said she was declining like her father, and did not expect to live long. Began treatment May 2, 1881. Continued the treatment three months. Result: restored to perfect health and from that time to the present, a period

of nearly eleven years, has not had any trouble with her lungs. In the spring of 1891, she had a severe attack of la grippe, but it did not effect the lungs.

Case II.—Win. Kemery. Previous duration of disease, three years. Symptoms: cough, moist rales, with free expectoration, loss of flesh, strength and appetite, night sweats, hectic fever, pinched features, pain in the lungs and dullness in upper portion of both lungs. Began treatment October 22, 1891. Duration of treatment, two months. Result: complete recovery. Mr. Kemery lost about fifty pounds in weight. Gained thirty two pounds in six weeks under treatment. Was reduced to about 130 pounds, at present weighs 170. He is an engineer at 243 Sycamore St., Cincinnati, and although his work is very hard on the lungs, being exposed part of the time to the furnace and then to the cold wind and dust, yet he is in perfect health.

Case III.—Mrs. Winkelman. Duration of disease, one year. Hereditary. Has spit up blood on numerous occasions and has had several hemorrhages. Symptoms: hectic fever, night sweats profuse, cough hard and tight, almost constant day and night. Expectoresates a thick, tenacious, mucopurulent sputa, mammular, sinks in water; loss of appetite, flesh and strength. Decided dullness all over the upper part of left lung, front and back. Moist rales both on inspiration and expiration in lower part of left lung and upper part of right. The rales were so loud in this case that when she was in one room a person in the adjoining room could count her respirations without seeing her. Began treatment October 20, 1891. First week the night sweats ceased. Third week, the cough had entirely ceased at night, feeling better in every respect, appetite and strength improving. Fifth week, thinks she is strong enough to run a sewing machine, left the city and I have not heard from her since.

Case IV.—(Reported by D. S. Brown, M. D., of Kentucky.)

KANE, KY., January 22, 1892.

Dear Doctor:—Will say that my wife is still improving on your treatment. She had been troubled with a long, continuous cough, had lost considerable flesh and had night sweats. She would cough up a heavy muco-purulent sputa, but since using your treatment she has gained fifteen pounds of flesh, looks well, and is improving rapidly. While she was suffering with la grippe she continued the treatment and I have reason to believe it to be good in that disease.

Dr. D. S. BROWN.

Case V.—Grace Wheeler, duration of disease, nine months. Symptoms: fever, night sweats, cough, expectoration, loss of flesh, strength and appetite. Constant pain in both lungs. Not able to get out of bed without assistance. Not expected to live more than a week. Debility so great from constant coughing that she was completely prostrated. For the last two months has been spitting up from a pint and half to two pints of muco-purulent material every night. Began treatment November 26, 1891. Result: in ten days was able to be out of bed during the day, night sweats had ceased, and appetite and strength improving rapidly. Four weeks, does not cough at all at night, says that she does not want a better appetite, has but little cough, and feels much better. Six weeks, has no cough and says she feels as well as she ever did.

Case VI.—Amanda Tarvin, Kane, Ky. Duration of disease, six months. Cough, expectoration, fever and chills, loss of flesh, strength and appetite. Began treatment about January 1, 1891. I did not see this lady. By request of Dr. Brown, her brother called on me and obtained the treatment for her. January 11, Dr. Brown reports her improving and feeling much better. February 10, her brother stated that she was about well and feeling as well as she ever did in her life.

Case VIII.—Mrs. Margaret L., aged sixty five. Duration of disease, ten months. Symptoms: fever, temper-

ature at first visit, January 3, 1892, 103.6 F., pulse 120. Cough hard and straining, with a heavy, thick, tenacious muco purulent expectorate, raising six ounces during the night. Loss of flesh, strength and appetite, with night sweats. Dullness in upper portion of left lung, front and back. Constant pain in region of dullness. Moist rales in upper portion of right lung, both on inspiration and expiration. Pain in this region and under shoulder blade on coughing. Complaints of pain all along lower border of ribs caused by the hard coughing spells that are required to dislodge the tenacious expectorate. Placed her upon the chemical treatment on January 5, 1892. January 28, she was able to get out of her bed and sit in a chair for a couple of hours. No more night sweats, appetite and strength much improved. Continued the treatment, and at the present time, February 10, she has no pains whatever in the lungs. Dullness has disappeared, still has some cough, but it is not severe; appetite good, regaining strength nicely and **doing her own housework.**

The following cases are reported by M. L. Amick, M. D., Professor of Anatomy and Diseases of the Nervous system, in the Cincinnati College of Medicine and Surgery.

Case IX. Mike S., aged twenty eight, married. I was called to him in November 17, 1891, as a consumptive patient, the mother informing me that he had consumption and requesting me to go and see him and do what I could for him. I visited him, found him very thin, weak, cough and night sweats and all of the signs of a consumptive. I wrote him various prescriptions and gave him different tonics and cough mixtures, all seemingly doing him no good. December 1, 1891, I placed him upon the chemical treatment. His improvement was slow at first, so much so that I feared he would succumb to the disease, but I had him persevere with the treatment and the result is, that about February 8, 1892, he went to work at his occupation and is still working.

Case X.—Mrs. McK—, aged forty-five, married. In September, 1891, she had typhoid fever, the result of which was the development of consumption. As she was very weak and feeble I had great difficulty in sustaining life. I placed her upon the chemical treatment December 25, 1891. At present, February 19, 1892, she is beginning to set up, is gaining and I expect a complete recovery.

Case XI.—Miss B—, aged eighteen. Very thin, pale and weak girl, with a high fever ranging from 102° to 105° F. For a number of days I was of the opinion that typhoid fever was developing, but the cough, peculiar sweat at night, and loss of flesh all seemed to point to the lungs, which in a few days showed marked dullness. As soon as I was satisfied that the lungs were the seat of the trouble, I placed her upon the chemical treatment. It was several weeks before there was any perceptible change and I was inclined to think that the case would terminate fatally. I had her persevere with the treatment, and, although her recovery was slow and tedious, yet when I saw her on February 19, 1892, she was entirely free from the cough and had been at work for two weeks.

Case XII.—Henry K—, had a clear case of consumption. He has been constantly under my care since April, 1891. I sent him away from the city during last summer. I gave him hypophosphites, cod-liver oil, malt and every preparation that has any virtue in it for cases of this kind. He returned home last fall and resumed work. In two weeks he was down in bed and seemingly worse than ever. As soon as I could get the chemical treatment I placed him upon it and watched him carefully for a few weeks, until he was up. I have not visited him since January 6, when he was slowly but surely improving.

Case XIII.—Mrs. K— was taken sick in April, 1891, with a cough and hoarseness. Her family physician said it would disappear. She consulted an eminent throat specialist, who gave her relief for the time being, but

night sweats developed, and she lost flesh rapidly. In August she was under the care of a second physician, as her cough and sore throat had returned and was worse than it was in April. She then consulted a second specialist on the throat with little or no relief. Then she passed under the care of an eminent professor in the profession, who treated her during the months of June, July and August, 1891. About December 26, 1891, I was called to attend her. I found her weak, emaciated and coughing almost constantly. She was expectorating large quantities of a tough, darkish expectoration which had a very unpleasant odor.

Upon examination, I found complete solidification of the left lung, with deep depression between all of the upper ribs of the left side. The solidification of the left lung was complete, and while her case had been diagnosed as consumption, there was an asthmatic complication with it. I placed her upon the chemical treatment December 26, 1891, and at this writing, February 18, 1892, the left lung has opened out so that you can hear the air entering the air-cells in the lung, and see the expansion between the ribs. She is improving, and it is only a question of time until she will be in good health.

Case XIV.—Mrs. P—, aged twenty-five, married. In December, 1890, and January, 1891, I attended her for a severe attack of pneumonia, with a slow but fair recovery. In December, 1891, she caught a severe cold, and her lungs became rapidly involved. There was hoarseness, cough, night-sweats, loss of flesh and appetite, and great loss of strength. I immediately placed her upon the chemical treatment, and at the present writing, February 17, 1892, her recovery has been all that I could ask.

Case XV.—Mrs. R—, aged twenty-eight, married. I was called to see her on January 12, 1892. Family history: one brother died of consumption, another following in the same direction, one sister tubercular. Examination showed consumption. She stated that she had been fed

on morphine for twelve months or more. I placed her upon the chemical treatment for consumption as soon as I could obtain it. During the last two weeks (this report being made February 19) she is improving and doing well. At first the disease did not seem to yield to the treatment, but perseverance led to success.

I notice that in some cases there is scarcely any improvement the first week or two, but that need not discourage. I find my patients not only soon learn to like the treatment, but say that they can not afford to go a day without it. This lady is now doing all of her own housework for herself, husband and two children, **without any assistance.**

Cases XVI and XVII.—Mr. Schaeffer, aged thirty-five. A chronic rheumatic, who has for a number of years suffered from both rheumatism and lung trouble. When called to treat him in November, 1891, I placed him upon the ordinary cough medicines and hypophosphites. His condition did not improve on this treatment. The hollow cough and dullness over the apex of both lungs gave me considerable anxiety. On December, 1, 1891, I placed him on the chemical treatment, and in less than a week he expressed himself as feeling better. He seemed to improve from the day I placed him upon the treatment. His boy Willie, aged eight years, also had a troublesome cough. About the middle of December, 1891, I placed the boy upon the chemical treatment. He had only used the treatment one week, when he said to his mamma, "I like it better than the cough medicine; it does me more good." They are now both well—the father at work at his trade and the boy at school.

Case XVIII.—Miss Nettie N—, single, aged twenty. She contracted a cold, which settled on her lungs, accompanied by a severe and constant cough. Hereditary tendency to lung trouble. Was under treatment two months—**result, recovery.**

Case XIX.—James P—, aged thirty-eight, married,

bricklayer. Is subject to frequent colds, and has had catarrh, bronchial irritation with a chronic cough for months. He was placed upon the chemical treatment and he appeared infatuated with it, as he said "it reached the seat of the disease." Result, recovery.

Case XV. Mrs. Ida Myers, married, aged thirty-two years. Has had weak lungs for several years, and could not live in a damp or foggy locality. Consumptive appearance very decided. Sinking below right collar-bone. Dullness all over upper portion of right lung. Loss of flesh and strength; hard cough and night-sweats. She was placed upon treatment November 3, 1891. On February 11, 1892, she writes from home in Kansas, and says: "I have been improving right along. The treatment is doing its part, and I think a great deal of it. I am feeling better now than I have for five years, for which we are very thankful."

Case XVI.—William M —, McMillan street. October 20, 1891, I was called in haste by a messenger, who said: "Come in a hurry, for he is bleeding to death." Upon my arrival I found that he had a violent hemorrhage from the lungs. He was cold, pulseless, and scarcely able to speak. I placed him upon stimulants and used hot applications. As soon as he rallied from the shock I placed him upon the chemical cure for consumption. He has not had a hemorrhage since he began the treatment, and ever since January 2, 1892, he has been working at his regular employment and is in a good physical condition.

Case XVII.—Mrs. S—, aged twenty-seven, married. Had an attack of pleurisy four years ago. Her father has had a cough as long as she can remember. One brother, twenty-three years old, has had a cough for several years. She has always had a cough, "a scratching cough from the bottom of her lungs, like sand-paper." On October 7, 1891, she had a violent hemorrhage, which continued every few hours until October 11th, when I

was called to attend her. She was so weak and exhausted from loss of blood that she could only whisper. I stimulated her for nine days before there was any return of the pulse that could be felt at the wrist. Then I placed her upon the chemical treatment for consumption. It was not until November 25th, that she could raise her head from the pillows. She has never spit up any blood since she began the treatment. At present, February 11th, she still has a little cough, but is not only out of bed, but is doing her own housework, and everything indicates that she will have a complete recovery.

Case XXIII.—Charles K—. Has had consumption for fifteen months. Inherits a disposition to catarrh and lung trouble. Symptoms—Constant cough, hard and tight, hectic fever, loss of flesh, strength and appetite. Night-sweats profuse. Was confined to the house for four months, and gradually growing worse under the ordinary treatment. He was placed upon the chemical treatment September 27, 1891. Result—January 2, 1892, he was so near well that he went to work, and has continued to work every day from that time to the present.

Case XXIV.—Mrs. S—. Had some lung trouble three years ago, partaking of the nature of severe attacks of bronchitis. Since then she has lost flesh and strength. Has a dry, tight and hard cough, and night-sweats. Dullness at the apex of the left lung, sinking under the right clavicle, and jerking respiration with prolonged expiration. She was placed upon the chemical treatment, October 29, 1891. Result—Completely cured.

Case XXV.—Mrs. S—, aged forty years, slim spare build. Symptoms—Dullness at the apex of both lungs. Sinking below clavicles. Bronchial respiration. Has had a cough for several years; night sweats. Has had no hemorrhages from the lungs, but when a tooth is extracted it is almost impossible to stop the bleeding. Loss of flesh and strength, gradually getting worse. Placed upon the chemical treatment November 1, 1891.

Result—Is now about well and does all of her own house work.

Case XXVI.—(Reported by Dr. C. E. Thompson, of Covington, Ky.)

COVINGTON, KY., Feb. 17, 1892.

DR. W. R. AMICK:—*Dear Doctor:*—I have tested your treatment in my practice, and it is the best treatment for diseases of the lungs, like consumption and asthma, that I ever used. I will report the following case:

James S—, aged sixty, has had a chronic cough for forty years. This was probably due to his trade as a moulder. For the past two years he has been gradually getting worse, and has been compelled to give up his work. During this time he had spit blood and lost both in weight and strength. On the first of this month he was in a condition that, under ordinary treatment, he could not live more than a few days. He would cough up a thick, tenacious sputum that was as black as tar; had night-sweats, and had gradually lost strength until he was completely prostrated. There was decided dullness in the upper portion of the left lung. Below the dullness there were moist rales. Expiratory sound prolonged. Right lung resonant. In this condition he was placed on your treatment on the second day of this month. At the present time, February 17th, on examination I find that the dullness has completely disappeared and the upper portion of the left lung is as resonant as the right.

Yours respectfully,

CHAS. E. THOMPSON, M. D.

Medical Examiner Prudential Life Insurance Co.

Case XXVIII.—Mrs. N—, aged twenty-five, married. A chronic rheumatic. Symptoms: loss of flesh and strength; dry, tight cough, night-sweats, sinking below clavicles; eating causing sickness at the stomach, followed by diarrhoea, presenting a condition generally that looks unfavorable. She was placed upon the treatment December 5, 1891. Result: February 20th, 1892, recovery.

We would report more cases of consumption, but we think the above are amply sufficient to prove what the chemical treatment will do for that disease. We will now report a few cases to prove that it will cure—

ASTHMA.

Case XXIX.—Mrs. M —, aged fifty-nine. Asthma and bronchial cough. She was placed on the chemical treatment for asthma and completely relieved in one week. No return of any asthmatic symptoms since.

Case XXX.—Mrs. Z —, aged forty-three. Asthmatic history. Has had asthma for three years. She was placed on the chemical treatment December 16, 1891. The husband reported that she did not suffer any more with asthma after the first night.

Case XXXI.—Fred G —, aged thirty-six. On December 16, 1891, had a severe attack of bronchial asthma. He was placed upon the chemical treatment at once, with almost instant relief, and has had no more attacks.

Case XXXII.—Mr. W —, had a severe attack of bronchial asthma. He is of a consumptive habit. He was placed upon the chemical treatment for asthma, with **the very best of results.**

Case XXXIII.—Mrs. Macht, aged twenty-eight. In December, 1891, she had a severe attack of *la grippe* followed by bronchial asthma. She was placed upon the chemical treatment December 20, 1891. In two weeks she was relieved and resumed her housework.

Case XXXIV.—A prominent business gentlemen here in the city, whose name and address I will furnish to any one desiring it, has had asthma for the last sixteen years. He was treated here without deriving any special benefit. Naturally desiring relief, and, if possible to be cured, he went to a warmer pine tree climate, where there was an institution for the treatment of lung trouble. He remained there for some time, but it did him no good. He was informed by the physician in charge of the institution that he was incurable. He then came home. A friend told him of a physician in New York that made a specialty of treating asthma, and advised him to consult this physician, who stated that he could

cure him. He was placed upon treatment and for a while derived some benefit. In a short time the medicine failed to do him any good, and his asthma was as severe, or even worse than ever.

He would wake up in the morning, and, if he did not have an attack immediately, he was afraid to move a hand or foot for fear that it would bring on a paroxysm. Then he would try to get out of bed by slow and graded movements, but he could not escape or avoid it, and every morning he would suffer intense agony for about two hours. During the day the least exertion or excitement or mental strain of any kind brought on an attack. This constant strain was overcoming his nervous system.

There were two centers of depression that felt like heavy weights. One was in the chest and the other was in the abdomen. With the constant recurring asthmatic paroxysms there was developed a gloomy and despondent disposition with dismal forebodings. The sensations of depression in the chest and abdomen were increasing, and it was only by the exercise of all the will power he could command that kept him from terminating this increasing miserable existence.

His mental anxiety was so great that he "died every day." During the paroxysms he would suffer untold agony, and in the intervals between the attacks there was no relief, for the dread of the next one, which was sure to come, constantly stood up in front of him, like Banquo's ghost, and "would not down at his bidding." Life was fast becoming so heavy a burden that he could not carry it much longer. He was contemplating to quit business and seek some climate or place where he could have some relief from this terrible anxiety and depression of spirits.

In this condition I placed him upon the chemical treatment for asthma, on the 30th of January, 1892. I saw him to-day, February 24th. He has been under

treatment not quite four weeks, and is mentally a new man. The centers of depression "have disappeared like a fog." The gloomy forebodings are gone. The frightful paroxysms are a thing of the past. There is no dread of the next time or the next morning. His mind is at ease, his nervous system is calm, he can think and study about his business with his old-time vigor and he is happy within himself. He said to a physician the other day: "Since receiving this treatment I do not think about going away, but will be found doing business at the old stand."

The following cases are reported by Dr. M. L. Amick :

Case XXXV.—Mrs. M., aged forty-eight. Was called to see her January 12, 1892, and found her suffering with bronchial asthma. Her history showed that she had been suffering with a tight, dry cough and labored breathing for some time. Posterior portion of lungs filled with exudate. I gave her the regular cough and asthmatic remedies, such as potassium iodide, lobelia, grindelia, sptr. ath. co., menthol, camphor, quinine, iron, arsenic and strychnia in syr. of hypophosphites, but without relief. On January 18, 1892, I placed her upon the chemical treatment. She was so much relieved that I ceased my visits on January 29. She has been perfectly free from asthma ever since.

Case XXXVI.—Mrs. Metzger, aged sixty-six. Was called to attend her on December 22, 1891. Found her suffering with asthma, unable to lie down, lips bluish, breathing very short and spasmodic, limbs swollen, heart feeble in action. I immediately placed her upon the chemical treatment. February 5, 1892, I dismissed her as entirely cured. She said upon my last visit that "this treatment was the best friend she ever had, and that she could not live without it in the house."

Case XXXVII.—Mrs. R. . Was called to see her December 20, 1891. Found her suffering with asthma, unable to lie down, lips blue, and breathing very laborious. I

placed her upon the chemical treatment and watched her for seven days, when she was so much improved that my services were no longer required. Her husband has since reported her condition as good.

Case XXXVIII.—Mrs. R., aged forty-four. Was called to visit her January 27, 1892. Found her suffering with asthmatic breathing and croup. Prescribed an anodyne cough syrup. January 30, not being relieved by the cough syrup, I placed her upon the chemical treatment for asthma. Discharged her on February 15, with the asthmatic breathing relieved and scarcely any cough.

Case XXXIX. James B. Corbett, aged nineteen, messenger in Cincinnati Post office. He had Asthma for twelve years. The attack comes on generally about 10 o'clock, p. m. and lasts all night, and sometimes for two days and nights. Attacks tight and dry. Has been treated by various physicians. Has used every remedy that any person could mention, but never received any relief until I placed him upon the chemical treatment for asthma, and this has given him complete relief. He called at my office on February 20, 1892, and made the above statement.

Case XL.—Mrs. S—, aged thirty eight. Called to see her on December 16, 1891. Physical examination revealed difficult breathing, and the posterior portion of the lungs laboring with a mucous rattle, loud, deep and sonorous wheezing, showing a violent attack of asthma. Unable to lie down. Almost a complete stagnation of air in the lungs. Worse at night, no sleep and her countenance was one of great distress. I placed her upon the chemical treatment and soon produced a copious, heavy expectoration, filling two or three spittoons during the night. Her difficulty of breathing was constant for eleven days, when it ceased under the treatment. She made a complete recovery.

OF INTEREST TO BACTERIOLOGISTS.

OFFICE OF A. F. JUETTNER, M. D.

Bacteriologist and Microscopist.

Case XI.—Mrs. S—, Scioto St., 28 years. Sister died of consumption.

First Examination, March 24, 1892. Extreme emaciation: unable to do any kind of work; has had several hemorrhages. Profuse expectoration, sputum purulent, extremely fetid, mixed with blood and swarming with millions of bacilli.

Second Examination, April 11, 1892. Patient has gained in flesh and strength: is very hopeful; voice clearer: no hemorrhage for two weeks. Sputum purulent, fetid, tinged with blood. Bacilli very numerous.

Third Examination, April 24, 1892. Patient gained more weight. Is able to be out of doors. Menses re-appeared. Sputum yellowish-green, muco purulent. Bacilli numerous.

Fourth Examination, May 23, 1892. Patient able to do her own housework. Sputum muco purulent, free from blood. Bacilli less numerous.

Fifth examination, July 16, 1892. Patient has done all her housework and nursed her six year old daughter during an attack of typhoid fever. Sputum mucous, containing pus and scattered bacilli, nearly impossible to find any. August 8th, patient went to the country.

A. F. JUETTNER, M. D.,

*Prof. Physiology and Histology, Cincinnati College
Medicine and Surgery.*

As we go to press we receive the following from a well-known medical writer:

THE AMICK TREATMENT.

There can be no doubt in the minds of the unprejudiced physicians who have thoroughly tested the Amick treatment for phthisis, that it is the best so far discovered. I have seen it cure a number of incipient and several second stage cases, and I have lately seen it arrest the progress of a case in which the lungs were catcombed with large cavities. Certainly the treatment constitutes, at least, a twenty-five per cent. advance in the therapeutics of this dread malady. This is true whatever may be Dr. Amick's ethical theories, and whether these meet our approbation or not. The physician who is also a philanthropist, will swallow a few small ethical scruples for the sake of his dying fellow-man. The above I give as my honest individual opinion.

W. C. COOPER, M. D.,

Cleves, O.

A RESULT NOTED IN CINCINNATI.

In a period of less than ten months, the death rate from consumption was decreased in Cincinnati, Ohio, 21.07 per cent.

Deaths from consumption from February, 1891 to	
January 1st, 1892	679
Deaths from consumption from February, 1893 to	
January 1st, 1893	536

An actual decrease of 21.07 per cent.

In the two worst months in the year for consumption the decrease was greatest: November, 1891, 62 deaths; November, 1892, 39 deaths, a decrease of 38 per cent.

December 1891, 89 deaths; December 1892, 41 deaths, a decrease of 54 per cent.

This is a matter of public record in the Health Department of Cincinnati, and can be verified by anyone.

Dr. Amick's Chemical Treatment.

INSTRUCTIONS TO PHYSICIANS. WE SEND SPECIAL
ADVICE SEPARATE.

DEMONSTRATION OUTFITS.

We send to each physician on application, *one outfit* of medicines to last each of his patients suffering with these diseases, for *ten days*—for which we make no charge.

These *outfits* are intended to show the patient that a prompt response to the influence of the medicines is noticeable in nearly every case. And in nearly every case the patient feels justified and encouraged to continue the treatment. We will not allow free outfits to be supplied to patients who have already taken the treatment.

No charge must be made for these free outfits by the physician. He will, of course, collect his usual fee for a physical examination at the time of making it if he sees fit to do so.

But one demonstration outfit must be given to each patient. If the patient desires to continue, the regular months outfit must be ordered.

The standard charge to the patient for the full month's outfit is \$15.00.

This Outfit consists of—

- One bottle of chemical tablets (120.)
- One bottle of " constitutional medicine (2400 drops.)
- One bottle of " inhaling medicine.
- One bottle of " injection medicine.
- One hard rubber inhaler with gauze (in the first outfit in each case.)
- Medicine droppers (in the first outfit in each case.)

In catarrh and hay fever we send an atomizer instead of an inhaler, also atomizer medicine, which differs from the inhaler medicine. One should not be used for the other.

The dropper should only be used until sufficient medicine is taken out of the bottle to admit of dropping from the lip of the bottle without running down the side. Then all the medicines should be dropped from the lip of the bottle.

There are one hundred and twenty tablets in the month's outfit, the other medicines will usually last a day or two longer. We will not supply a single bottle of any of the medicines, except where lost through breakage.

Each part of the treatment must be taken to obtain the proper results, and if the directions are faithfully followed all of the medicines will become exhausted at about the same time.

The charge for single bottles to replace medicines lost by spilling or breakage is \$3.00.

Remittance must be made with the order in every instance, or medicines must be sent C. O. D.

We guarantee safe arrival of medicines. When packages are apparently in bad condition they should be promptly accepted and opened, and the agent certifying to the broken bottle, the label should be sent to us by mail, and we will immediately replace the medicine by mail. This can be done in one fifth of the time it would require to replace through making claim for breakage against the Express Co.

We have an understanding with all of the companies by which all claims for breakage are settled here. Always have its agent certify to the bad condition of the package.

All medicines are carefully packed and breakage seldom occurs. All medicines must be sent by express except single bottles.

With each package we send carefully worded printed

instructions for carrying out the treatment in addition to the directions on the labels.

No mistake can occur if these instructions are followed.

It is simple and pleasant to take the chemical treatment.

We must not be asked to depart from any of our rules, they are known and standard throughout the country.

Physicians should at least give us a brief history and description of each case they order medicines for.

For reasons of professional courtesy we do not present here any of the thousands of endorsements of the treatment from physicians and as the profession naturally does not recognize the secular press as competent to pass on medical questions we do not reprint any of the hundreds of pages published by the daily press recounting wonderful results from the treatment. It would show cowardice and ingratitude however to ignore our appreciation of the Cincinnati *Post's* work in first making known the merits of Dr. Amick's discovery.

Its publication of the results in the desperate cases of Consumption and Asthma selected by that newspaper for public tests of the treatment was instituted voluntarily and even without Dr. Amick's knowledge or sanction. The *Post* never asked or received one penny for this humanitarian work. It willingly and freely gave the time of its reporters, its medical examiner and its editors as well as page after page of its valuable space to impartially demonstrate whatever there might be of merit in the discovery of the Cincinnati Medical College professor.

There can be no valid or ethical objection to the reprinting of editorials from representative medical journals, and a few of the many kindly utterances from this gratifying source follow:

(*The Doctor of Hygiene, New York, Dec. 20, 1893.*)

We have delayed for something over a year giving notice to the Amick treatment for Consumption for the reason that inasmuch as the formula was not given to the profession time alone would demonstrate whether it merited condemnation or endorsement. With the evidence which month after month has accumulated we are obliged to admit the preponderance of testimony favors Dr. Amick's claims and in the face of the results reported from physicians, who if anything were rather disposed against the treatment at the beginning, and who at all events were certainly not prejudiced in its favor, the claims of the Cincinnati physician appear to have been within the bounds of truth and conservatism. In third stage cases Dr. Amick stated as the result of his own experience, that where there was no outside complication his treatment would stop the progress of the disease and prolong life indefinitely in perhaps one case out of five. He even qualified this statement with the remark that naturally where the lung capacity had been reduced to a point insufficient to sustain the system, his treatment would be of no other avail than to postpone the hour of dissolution and to render the last hours of the sufferer more peaceful. In second stage cases Dr. Amick claimed that the records on file in his office proved the recovery to comparative health of one half of the whole number of the cases treated by him, while in the first stage cases free from complications of other diseases the proportion of those restored to a normal condition free from all symptoms of the disease was found to be 80 per cent. Since the time those claims were made the treatment is said to have been adopted and endorsed by quite a large proportion of the entire number of practicing physicians in this country. The Amick Chemical Company, into whose hands Dr. Amick has placed his formula, and the distribution of the medicines, claim we believe, that one half of the hundred thousand or more physicians in the United States have ordered the Amick medicines; at any rate, it seems certain that quite a large proportion have approved of Dr. Amick's theory on which his treatment is based, and a great many prescribe it in all cases of pulmonary troubles coming in to their care. It is only recently that prominent medical journals have noticed the Amick treatment, but as the cures already reported are proven by time to be permanent, the mouth pieces of the medi-

cal profession are showing a disposition to give the treatment serious consideration. The *Medical Brief* of St. Louis devoted four pages of its November issue to the differentiation of the various phases and stages of phthisis and tuberculosis as set forth by Dr. Amick, and this appears to be the first time in the history of medicine that any exact rule has been formulated for the guidance of physicians in making physical examinations of consumptive subjects. The various text books now extant are, so far as our examination goes, silent on the details of this important matter, and we should be glad to hear the opinions of other medical experts on the set of rules thus enunciated by Dr. Amick. Whatever he says is entitled to respectful hearing, even from those who claim that he to-day violates the code of ethics, if for no other reason than his hospital training and his seventeen years professorship in the Cincinnati College of Medicine and Surgery. On one point the profession, even that part of it inclined to hold Amick blamable for withholding his formula, is agreed; he has from the first shown an evidently sincere desire to have crucial and impartial tests made of the treatment by each physician of whichever school no matter where located. To this end he distributed broadcast test packages of medicines by the thousand, each of which must represent quite a little money. It is probable that had Dr. Amick instituted a secret remedy for any other disease he would not have found it so easy to secure its adoption by those of his medical brethren who disagree with him as to what constitutes the true ethics of the profession, but all conscientious physicians have no hesitancy in admitting themselves powerless to cope with this destroyer of life and have felt bound by the dictates of the great unwritten code, "heal the sick," to give sufferers under their care anything from a reliable source holding out a chance of recovery. Those, and the number seems increasing, medical men claiming that Amick's reasons for keeping his formula to himself until such time as its merits are everywhere recognized are good and sufficient, point to the fact that in making his contract with the Amick Chemical Company he required them to give bonds that his treatment would be confined to the profession and that it would in no case reach the patient excepting from the hands of the attending physician.

(*The Medical Visitor, Chicago, January 1894.*)

CONSUMPTION.

Dr. J. S. Hopkins of Thomasville, Ga., which place is a resort for consumptives, declares that he has joined the army of physicians who believe with Koch that tuberculosis should be placed in the category of contagious diseases and that suitable safeguards to prevent its communication—probably isolation—should be adopted.

Dr. Hopkins emphasizes the danger that lurks in sleeping cars, carpets, bedding, clothing, and even the walls of apartments occupied by consumptives. Says he, "consumptives should be forced to provide for the destruction of sputa. Whereversituated so as not to expectorate directly into a germicide or the fire, they should use some means of conveying the sputa to the germicide or flames. If handkerchiefs or cloths are used they should not be sent to the laundry, as human happiness and life are jeopardized through the probability of inoculation through abrasions upon the hands.

"These bacilli should never be allowed to dry up and impregnate the air as is now done through ignorance of possible result."

Nineteen years of observation and familiarity with the care of the colony of consumptives at Thomasville have brought the doctor to believe that the resorts which have heretofore solicited the patronage of the consumptive will quarantine against him.

If we are to accept this seemingly well-considered and deliberate opinion, we must admit that the outlook for the unfortunate phthisical multitude is forbidding indeed. If medical men generally proceed to cloak themselves in the germ theory, and, admitting inability to cope with the disease, or even to appreciably alleviate it, spurn the consumptives from the community, whither shall the afflicted turn?

The newest noteworthy effort on behalf of the consumptive is the treatment of which Dr. W. R. Amick of Cincinnati, O., is the author. Quite frequently of late we hear reports and rumors from Cincinnati as to excellent results obtained with the "chemical treatment." Although the Amick idea has been rather radical for the ultraconservative practitioner, it does seem that the treatment could not have been taken up with more avidity and its virtue seems to have been definitely established. We understand Dr. Amick is making no especial effort to

force the profession to his views, but sends his medicines for tests to all reputable practitioners free.

(*Medical Review, St. Louis, Mo., Dec. 30th, 1893.*)

* * * Indeed there are those in the front rank of the profession who hold that consumption is not contagious and that the bacillus tuberculosis is not the cause but merely a result, a product of the disease itself. Upon this latter theory is based the new treatment for pulmonary ailments—that of Amick, of Cincinnati, for which a long list of successes has been proven in a field in which medical science has heretofore been admittedly helpless. Dr. Amick in his endeavor to prove that this ruthless foe of mankind is not invulnerable, has sent his medicine to a great number of physicians who have expressed a willingness to investigate his theory and treatment. In Cincinnati a decrease of 21.97 per cent in the mortality is attributed directly to the wide usage there of Dr. Amick's treatment. Probably New York City and our foreign friends too may learn something from this honored Western physician.

(*Medical Arena, Kansas City, Mo., January, 1894.*)

Again the influenza is with us, and it brings its usual promise of an early multiplication of cases of lung trouble. The physician interrogates his materia medica for arms with which to meet the onslaught, and dusts off volume after volume to little purpose. Possibly, after all, he is searching in a "back number" field for a means to meet an up-to-date emergency. The belief is held by several physicians, who have taken up the recently introduced Amick chemical treatment and who express enthusiastic opinions concerning it, that the grip has been robbed of half its terrors. Certainly if the treatment of Dr. Amick accomplishes what is asserted for it in lung ailments, the mortality consequent upon the present epidemic of the imported plague must be materially decreased. Still, however excellent this new treatment may be in the wide and important field for which it is calculated, the entire profession is unlikely to unite in endorsing it by prescribing it as long as Dr. Amick continues to withhold the formulas. The claimed reason for this determination to disclose no ingredients and method of composition of the medicines is that they would immediately be experimented and sub-

stituted in many cases out of all semblance to themselves, and a great deal of resultant failure and disappointment would be laid at Amick's door. A criticising physician demands, "Are we to understand from Amick's statement that there are no able and honest chemists outside of Cincinnati?" A moment's reflection will, however, show the frater wherein he misjudges Dr. Amick, for the latter has not said that all chemists would be disposed to alter or impair the usefulness of the treatment, but that some, urged by inordinate curiosity or avarice, would do so, and Dr. Amick has provided by taking his positive stand that not a single patient shall be imposed upon or deluded by that ilk.

(*The Physio-Medical Journal, Indianapolis, Ind., Dec., 1893.*)

THE AMICK CONSUMPTION CURE.

Lately a great deal has been heard about a treatment for pulmonary and bronchial ailments with which remarkable results are understood to have been accomplished by the discoverer, Dr. W. R. Amick and other physicians. These reports have emanated largely from Cincinnati, where Dr. Amick has been for over a decade and a half a professor in a leading college of the regular school.

According to these accounts it has been no unusual thing for Dr. Amick and other practitioners using his treatment to effect permanent recoveries in advanced cases of consumption in two or three months. The assertion is made that in incipient and first stage cases failures have been very rare, that in the second stage about half the cases recover, and in the third stage about one fifth.

Dr. Amick's etiology and pathology are directly opposed to the generally accepted germ theory. The treatment consists of an inhalant which is palliative, tablets and a liquid taken internally, and an enema. The entire treatment is easy and pleasant to take, the relief is speedy, and the progress toward recovery gradual and substantial.

It is a matter of record in the health department of Cincinnati that the mortality from phthisis pulmonalis has decreased 21.07 since the Amick treatment was first generally prescribed there this in the face of the ravages of gripe and a steady increase in population.

In asthma, chronic bronchitis, tubercular laryngitis

and catarrh equally encouraging results are said to have rewarded the investigators.

The claims for Amick's treatment will doubtless soon have been investigated by every leading physician in the land, and every one of them must sincerely hope that this time the promised "cure for consumption" is no chimera.

(Medical Current, Chicago, Ills., January, 1894.)

We have before us a list of several thousand physicians, including many of high standing in the profession, who have continued prescribing the Amick treatment for consumption after using the test medicines. Prefacing these names is this statement of the Amick Chemical Company, who control the distribution of Dr. Amick's medicine: "We do not use the names of these doctors as references or testimonials or endorsements and some of them, by reason of the code of ethics, will hesitate in saying they have obtained favorable results from any treatment the formula of which is not made public. Dr. Amick insists that his treatment must stand or fall on its merits and expresses his entire willingness to abide by the unbiased and uninfluenced reports of his brother physicians. To this independent and fearless statement we respectfully add that in printing this list of well known medical men we prove equal confidence in Dr. Amick's discovery and equal willingness that the expressions of any of them be obtained by other members of the medical profession."

While we have never endorsed Dr. Amick in withholding his formula, we do feel constrained to admit that his every word and act has shown earnest desire to have his discovery thoroughly tested and the results impartially made known: he has for the past year or more distributed through the Amick Chemical Company test packages of his medicines, without cost to the medical profession, everywhere and has invited all these physicians to make known their experiences in any manner they choose. That this has brought forth a vast amount of medical testimony favorable to his claims and comparatively few unfavorable reports is now well known. We think it worthy of notice also that the medicines can only reach the patient through the attending physician.

(The Medical Progress, Louisville, Ky., January 1894.)

We have several times been asked to express our opinions concerning the treatment for consumption instituted by Professor Amick of the Cincinnati College of Medicine and Surgery, but inasmuch as he positively declines to make known his formula, we have been placed between two fires as it were. On the one hand, we could not endorse a treatment while ignorant of its composition until sufficient time had elapsed for its value or worthlessness to be thoroughly demonstrated. On the other hand, we have felt obliged to consider the recognized position, influence and standing of the author of the treatment as being in a measure something of a guarantee and assurance that what he had discovered must be, in his own belief at least, what was claimed for it. We have therefore held aloof from either praise or blame until now that the treatment has been under the critical observation of several thousand in the profession for a year or more. Without at all entering into the merits of the mooted question as to whether Amick is any more deserving of censure for what is certainly a technical violation of the code than is the rank and file of his professional brethren who every day prescribe medicines the ingredients of which they are ignorant of, it is only simple justice to admit that the reports from these physicians have been in the main favorable to Dr. Amick's treatment. Even those who dispute the correctness of the Amick theory, so-called, express themselves satisfied that the treatment based upon it is more successful than any other with which they have been made familiar; many amongst those who speak loudest in blame of the secrecy with which the formula is guarded say they can not conscientiously refuse to prescribe it, having seen it succeed where everything else had failed. It would seem incumbent, therefore, upon each physician who has not as yet investigated the treatment to send for the trial medicines which the Amick Chemical Co. advertise in all medical journals to furnish without cost to members of the medical profession everywhere. Whatever offense Professor Amick is guilty of concerning the code he has shown an earnest desire to guard the interests of the profession as well as his own reputation amongst medical men by insisting that the treatment must either stand or fall on the results noticed by medical experts, and that no patient should receive the treatment excepting at the hands of the family

doctor. The question of the code is a vexed one at the best, and the lines which some of the profession are charged with transgressing are too indistinct and undefined to warrant the ostracism of a man whose reputation otherwise is blameless and without reproach. It so often happens that the complainant is himself an offender that he should first make sure he has "cast out the beam from his own eye" before drawing attention to the mote in his brother's eye.

(*Toledo Medical Compend, Toledo, O., December, 1893.*)

PULMONARY TUBERCULOSIS.

We have recently received from a number of physicians, some of whom are frequent contributors to these columns, statements of their experience with the chemical treatment for tuberculosis of the lungs of which Dr. W. R. Amick, of Cincinnati, Ohio, is the author.

These reports are invariably favorable to Dr. Amick's claims for his preparation, viz.: That a large majority of cases in the earlier stages and a percentage in the latter stages have been restored. Some of the cases are attested through microscopic examination of the sputa to have been true cases of phthisis, while in others no proof is offered beyond statement of physical examination.

Still, so considerable is the weight of evidence offered that it is but fair to give some mention to this chemical treatment despite Dr. Amick's action in declining to disclose his formulae, which reservation he makes ostensibly, that the discovery may not be lost through broadcast attempts at improvement and substitution.

Dr. Amick's theory is opposed to Koch's in that he holds the bacillus microbe to be a mere evidence of the presence of the disease—a product instead of a cause. Therefore the treatment is only incidental germicidal—the microbe decreasing in numbers and disappearing as the improvement progresses.

Dr. Amick has not debarred the profession at large from making the most searching investigation or experiment with the chemical treatment, inasmuch as he requests of all practitioners that they send him diagnosis of phthisical cases on hand, whereupon he agrees to send from Cincinnati, enough of the medicines to test its action in each case. This proposition must be quite as

expensive as it is unique, for the so-called "outfits" of medicine include an Amick inhaler and quantities of each of the four medicines. It would seem that Dr. Amick's personal confidence in the treatment he has devised must be very great indeed, and from the evidence at hand his confidence appears to be well founded.

(*The Southern Clinic, Richmond, Va., Jan., 1894.*)

Other Things in the World Besides Microbes.

"Let us proclaim loudly enough to be understood, that there are some things in the world besides microbes. It is a very flood of animalcule that has been let loose upon the world. Let us stop; for mercy's sake, let us stop."

Charcot's characteristic exclamation is doubtless frequently echoed in the hearts of many American physicians. Since the advancement of the Koch theory and tuberculin—saddest of disappointments to an expectant and hopeful world—the germ theory has been going about, figuratively speaking, on crutches.

Meanwhile in our own country has arisen a theory of treatment for tuberculosis which vividly brings to the mind of the practitioner the fact that "there are some things in the world besides microbes." Just as the Koch concoction has become obsolete and given place to the chemical compounds of Prof. Amick, so the germ theory in its entirety has passed to a timely interment.

With the progressive physician, it is results—permanent results—which weigh heaviest in the balance, and it is due Dr. Amick to state that the chemical treatment has not failed in a vast number of cases of which record is at hand to effect a very marked and gratifying benefit which in the majority of cases has been substantial and lasting.

The claims of the author for his chemical treatment are that in the first stage of tuberculosis 80 per cent. recover entirely; in the second stage 50 per cent.; and in the third stage 20 per cent., or one patient in five, is restored to health, reasonable vitality and activity, and a capacity for happiness for the remainder of his life.

Rather than being exaggerated, physicians generally who have intelligently and conscientiously used the treatment—which is by no means a heroic one—declare

that Dr. Amick's modesty and conservatism has caused him to underrate the value of his treatment, in other words that the percentage restored is, in each stage, greater than the estimate he makes.

Although we do not publish the testimonials even of physicians our files are filled with thousands of the strongest testimonials that can be constructed from the English language, from grateful patients and their more than pleased and satisfied physicians. These files are always open to interested persons.

Complications in Consumption (Amick.)

Serious complications are very frequent with persons suffering with pulmonary consumption. As we have frequent inquiries as to the best method of treating these complications, we have concluded to give a few formulae for the benefit of the physician, which we have found effective.

Where the inflammation has extended into the parenchyma of the lung, with or without the formation of a pyogenic membrane, or where there is a material element, there will be persistent fever with, generally, an afternoon or evening exacerbation, frequently attended with chills or chilly sensations. For this condition we suggest the following:

PRESCRIPTION FOR CHILLS AND FEVER.

No. 1. ℞ Acetanilid gr. xv.
 Quinine sulph gr. xxx.
 Soda salicylate gr. xlv.

M. 10 capsules No. 15. sig. One three times a day.

The attending physician may increase the amount of acetanilid to two grains. This is a good combination to reduce the fever that is more or less continuous in lung diseases. The ordinary fever of the first and second stages generally disappears under the use of the chemical treatment. Where there is persistent fever without any tendency to chills or chilly sensations, the following may be used:

No. 2. ℞ Tinct. aconite rad 5ss.
 Tinct. verat. veride (Norwood) 5i
 Tinct. digitalis 3ij.
 Antim. et pot. tart. gr. ij.
 Tinct. gelsemium 3ij. ss.

M. Sig. Seven drops in a tablespoonful of water every hour while the temperature is 102° F. or above, and every two or three hours when it is below 102° F. and above 99° F. Where there is any objection to the use of antim. et pot. tart. it may be omitted and the dose increased to ten drops.

If the time for giving the fever medicine should be at the same time as the chemical constitutional medicine, they can be given together. If it should be at the time for taking the tablet, it can be given a few minutes before or afterward. In nearly all of these cases there is a reflex irritation of the spinal cord, so that it is necessary to apply a counter irritant to it. We use the tincture of iodine and paint a strip two inches wide and six or eight inches long, commencing at the seventh cervical vertebra and extending downward between the scapula. This should be done every day until the skin begins to crack or scale, when it can be discontinued for a few days and then applied again if necessary.

In some cases there is an atonic condition of the stomach quite frequently attended with evidence of a catarrhal condition. Coughing may produce nausea or vomiting. The appetite is poor and the patient states that the stomach is weak. For this condition we use the following:

PRESCRIPTION FOR GASTRIC DISORDERS.

No. 3. \mathcal{R} Ac. carbolie 5i.
Tinct. iodine 5i.

M. Sig. Two drops in a tablespoonful of hot water three times a day, fifteen minutes before eating.

In these cases it is generally beneficial to use lime water in the milk, as it not only has a tendency to prevent nausea and vomiting but to check the disposition to diarrhoea that is common in this condition. Quite frequently we find an irritable condition of the stomach, attended with or followed by pain in the bowels, which is generally followed by a diarrhoea. For this condition we would recommend the following:

No. 4. \mathcal{R} Tinct. camphor 5i.
Bis. sub. nitrat 3ij.
Syr. limonis 3iv.
Syr. zingiber, q. s. ad . . . 3ij.

M. Sig. Teaspoonful in two tablespoonfuls of hot water every fifteen or thirty minutes until relieved.

Another complication which presents itself quite frequently is diarrhoea. As a rule, when a consumptive has diarrhoea, he loses flesh and strength quite rapidly, so that it is essential to check it as soon as possible. We would recommend the following:

PRESCRIPTIONS FOR DIARRHOEA.

No. 5. \mathcal{R} Acid tannic gr. xij.
Ext. berberid 2ʒ i.
Pulv. ipecac gr. i.
Pulv. opil gr. vi.
Compos. Roses ʒss.

M. Ft. capsules No. 12. Sig. One every six hours.

The following is probably the best remedy in the largest number of cases and especially where there is a dysenteric tendency:

No. 6. ℞ Tr. opii 3ii.
 Pulv. amyli 3i.
 Aq. dist. q. s. ad 3ii.

M. Sig. With a small syringe inject a teaspoonful into the bowel every four or six hours. Always shake thoroughly before using.

NIGHT-SWEATS.

For the night-sweats that are so common in pulmonary diseases we would suggest the following:

No. 7. ℞ Atropia sulph grs. ʒi.
 Zinci. oxide grs. xv.
 Ext. hyoscyamus grs. xv.
 Pulv. doveri grs. xv.

M. Ft. capsules No. 15. Sig. One at bedtime, to be repeated if necessary.

Another valuable remedy which generally stops the night-sweats after it has been used a few times, is:

No. 8. ℞ Quinine sulph 5i.
 Alcohol 3xvi

M. Sig. Sponge the body and limbs quickly but thoroughly at bed time. If the patient has been perspiring, sponge the body and limbs with water, to which a little aqua ammonia has been added (teaspoonful to a quart), rub dry and then apply the above.

Where there is a persistent and hacking cough that keeps the patient awake at night, the following can be used:

No. 9. ℞ Pulv. doveri 5ss.
 Kalii iodidi ʒss.
 Ammon. mur ʒi
 Syr. prun. virg ʒss.
 Glycerinae ʒss.
 Aq. dist. q. s. ad 3ii.

M. Sig. Teaspoonful at dose to be repeated every two hours if necessary

For irritable or sore throat the following will be found beneficial: spray the throat with hydrastis, listerine, or pinus canadensis, diluted with five times the quantity of water, or salicylate of soda five grains to the ounce of water. Guaiac tablets are also good, or

No. 10. R Tr. aconiti gr vi.
 Tr. guaiac 3ii.
 Tr. ferri chlor 3ss.
 Kali chlor 5ss.
 Glycerinæ 3ss.
 Aq. dist. q. s. ad 3ii.

M. Sig. Teaspoonful in a tablespoonful of water after meals.

On account of reduction of vital force there may be weakness, debility or prostration so decided that a stimulant becomes necessary. Ten grain doses of carbonate of ammonia given in an ounce of milk every half hour, hour, two hours, or as may be required, is an excellent remedy. While we do not recommend the regular use of alcoholic stimulants, yet when they are indicated by marked weakness, prostration, syncope, etc., we do not hesitate to use them. When these conditions have disappeared, then we cease to give them, as their continued use, except sometimes in the last stage, is not desirable, but does more harm than good.

SWELLING OF THE FEET.

Swelling of the feet and lower extremities may be due to weakness in the capillary circulation, as a result of the general debility of the system. It may be due to disease of the heart, liver or kidneys. Where the swelling is from general debility, it is almost always associated with imperfect digestion and assimilation. To overcome this condition, we must increase the appetite and aid digestion. For this purpose we would recommend the following:

GENERAL TONIC.

No. 11. R Shaeffer's Pepsin 5iss.
 Syr. limonis 3i.
 Elix. Quiniae, ferri-phos-
 phas et strych 3ii.

M. Sig. Teaspoonful in water three times a day before meals.

Should the physician find disease of the heart, liver or kidneys, he can prescribe such remedies as in his judgment, may be indicated. We want the physician to understand that none of the medicines that are generally prescribed by the profession in the treatment of the complications that may arise in diseases of the lungs, are incompatible with the chemical treatment. Any of the foregoing formulæ that we have given, or any remedies that may, in the opinion of the physician, be indicated, can be used in connection with the chemical treatment.

HAEMOPTYSIS.

For hemorrhage the following may be used. Absolute rest is imperative.

No. 12. R Tinct. Cinnamon 5ii.
 Tinct. Digitalis 3ss.
 Fl. Ext. Ergot Squibb's q. s. ad. 5ii.

M. Sig. Teaspoonful every hour at first; then every three to six hours.

No. 13. R Pulv. Alum 5i.
 Pulv. Ipecac 3ss.
 Sacchari Albi (sugar) 3ss.

Mix. Make eight powders and take one in water every two to four hours.

Galic acid and hamamelis are both good. A hemorrhage may sometimes be stopped by the application of ice to the chest for one or two minutes at a time.

While there is spitting of blood, the medicines are to be used according to the directions, but do not breathe so deeply while using the inhaler, until all signs of blood

have entirely disappeared from the expectoration. For spitting of blood, use either one of the above prescriptions, taking a dose three or four times a day.

BLEEDING FROM THE NOSE.

As persons suffering from catarrh and diseases of the lungs may be troubled with bleeding from the nose, we would suggest that the following be used:

No. 14. R Acid tannic 3ii.
Bismuth sub. nitrate 3x.

M. Sig. Snuff up the nose freely or use it with a powder-blower.

Aristol may be used in the same way and will be found very useful in checking the hemorrhage.

DIET.

As a rule we allow quite a wide range in diet, including soups, fish, meats, vegetables, fruits, etc. We generally say, eat any good wholesome food that is easily digested and agrees with the stomach. When there is a disposition to diarrhoea, especially in the last stage of the disease, be careful in the use of fruit and berries, particular those that have small seeds in them. A patient soon becomes a law unto himself in regard to diet and then that law should be obeyed.

EXERCISE.

The best exercise is walking. Horse-back riding is not recommended, as the jolting favors hemorrhage. Carriage or buggy riding does not give any muscular exercise, and sitting in a draft in a buggy is just as liable to produce a cold as sitting in the draft of an open window. Out door exercise is good, but it must not be carried to excess. Violent or exhausting exercise is injurious, but a judicious amount of walking will not injure any person who is physically able to be out, provided the weather is favorable for such exercise.

THE CHEMICAL LIVER PILL.

In the majority of diseases the physician finds there is a torpid condition of the organs of secretion and elimination. It is frequently a difficult and tedious undertaking to relieve a patient of almost any disease while the organs are in this condition. The trouble is that a diuretic does not have the desired effect upon the liver, and a cholagogue does not overcome the torpor of the spleen and pancreas. The difficulty has been to obtain the proper remedies in a suitable form that would have the desired effect on these organs.

After a prolonged clinical test with different agents, we have succeeded in making a combination in a pill form that overcomes the torpidity and sluggish action in these organs. We have seen cases of chronic malaria that had resisted all of the anti-malarial remedies, respond readily to quinine and arsenic by taking one of the chemical pills at bed time. In disorders of digestion with dizziness, eructations and spitting up of food, we have seen the atonic and apathetic condition of the stomach, together with the attendant disorders, disappear under the effect of one chemical pill a day. In remittent fever, and the so-called billious fever, we have seen the fever decline in twenty four hours after the chemical pills were taken. In these cases where there is a coated tongue, languor, headache, hot and dry skin with constipation, we have seen all of these symptoms rapidly disappear under the use of one chemical pill every four hours until they had acted on the bowels in conjunction with the fever medicine given according to the directions. We have seen general dropsy that was at first abdominal, disappear from the system under the use of the chemical pills and boneset tea, when all of the ordinary diuretics had failed. We have removed the fluid from the abdominal cavity, following scarlatina with the chemical pills and small doses of elaterin when

all diuretics and hydragogues, including elaterin, had failed. The course of all acute diseases can be modified and quite frequently aborted by the use of the chemical pills. In habitual constipation, they relieve the nervous torpor in the muscular coat of the bowels and relieve the congestion of the portal system. They are excellent in headache, as they supply the proper tone to the organs that are the principal cause. For a torpid or sluggish condition of the liver they are the best that can be made. They provide a natural laxative.

No pain or griping accompany the taking of the chemical liver pills. Physicians, in ordering the chemical treatment for consumption, asthma, or the other diseases, may call our attention to conditions needing the chemical pills and we will send ten (10) pills with the outfit. We will supply them in quantities as follows:

100 Pills	\$ 1 00
500 "	4 00
1000 "	7 00

Sent by Mail.

CHEMICAL HALSIQUINE PILLS.

We have received a large number of letters from physicians asking for information and advice about their patients. It is evident from these letters that there are many people who are suffering from a want of proper nervous energy and harmony between the different organs. This condition is frequently present not only in consumption but in many other diseased conditions. It may follow as a sequelæ of a number of diseases or it may develop gradually independent of any acute malady. It is a condition in which there is a want of nervous tone in the organs frequently without any acute disease in any of them. Its type may be seen following La Grippe in which there is left a condition of inability on the part of the nervous system to appropriate the proper

quantity and quality of *substantia* from the pabulum furnished it to generate and carry the necessary amount of vital influence to the various organs that will enable them to perform their function in the economy.

It is a condition that would be expected in brain fatigue, producing a weariness and languor in the organs of the body. The appetite may be fair, variable or poor, but there is something more than food required for the system to overcome this lethargic condition. There is a languor in the functional activity of the entire organic system and a want of natural vigor and ambition.

It is a condition that is also a result of the hustle and hurry of the average American business man. He finds after a certain length of time that he does not possess the normal amount of vitality, and business cares have a tendency to worry and depress him.

This condition is one that precedes or paves the way for numerous diseases. It may be followed by disease of the kidneys especially Bright's disease and diabetes. It may be the cause of weakness of the muscular system, especially of the heart or sphincter muscles. It may produce depression of spirits with a weakening of the intellect so that in reasoning or studying on any subject the mind is unable to develop or retain a connected chain of thought, but the ideas become confused.

To overcome this condition and restore the nervous energy and vigor of the brain Dr. Amick has originated a treatment which we have put up in pill form. We call them the Chemical Halsiquine pills, and they can be depended upon to meet the indications in the above conditions. We have used them extensively and have reports from a large number of physicians speaking of the benefit derived from their use. Whenever there is a want of nervous tone in the system they can be relied upon as the best pill for that purpose that is offered to the profession. They are also indicated in debility following any disease, and in the majority of cases no other

medicine is required to restore the system to a normal condition, surpassing the hypophosphite preparations for this purpose. They are the ideal nerve tonic. We will supply them in quantities as follows:

100 Pills	\$ 1 00
500 "	4 00
1000 "	7 00

Consultations with the Drs. Amick.

Drs. W. R. and M. L. Amick have been retained by this company and their services are now devoted exclusively for the benefit of physicians using the chemical treatment, and of patients sent by them to Cincinnati. The Drs. Amick have each given up their general practice, their college professorships and hospital work, and each outfit of medicines is prepared under their personal supervision, to meet the varying indications present in the case. All correspondence with physicians, where medical questions occur, symptoms given or expert professional advice is asked, has Dr. Amick's personal attention. No charge is made for this service to physicians prescribing the treatment.

Dr. Amick can not be seen on Sunday, and physicians sending their patients to Cincinnati should time their arrival here accordingly. No day now passes which does not bring physicians or sufferers from several different states, and it is advisable to make appointments by mail or telegraph. Much discretion must be exercised by the physician concerning the coming to Cincinnati of enfeebled consumptives from a long distance; unless the patient has sufficient strength to travel without being occasioned more than ordinary fatigue the trip would be ill advised. Patients come to Dr. Amick every week, residents all the way from Maine to Texas, and from New York to the Pacific coast, who could have received the treatment with equal benefit from the

hands of their family physician. In overcoming outside complications, so often present in consumption, it is necessary that a minute history of the case be sent; this done the profession is assured of all the benefit which would result from a personal consultation with both the Drs. Amick. Where patients express to their physician an intention of writing Dr. Amick personally they should be told that their letters will be acknowledged by us, but will not reach or be answered by the doctor, as he has asked us, in all such cases, to say that he can not advise with patients except through their physicians.

While it is now evident that sooner or later all physicians, regardless of school, or code, or creed, will find it necessary to prescribe the Amick treatment, they are assured that its use will always be confined to reputable members of the medical profession. It will be kept out of the channels of quackery at whatever cost, and surrounded with every possible safeguard that conservative ethics can suggest.

The Amick Chemical Co.,

No. 166 W. Seventh St., Cincinnati, O

